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Conference Brochure 2010: Abstracts and CVs

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Dr Nikos Malliaropoulos

Congress Organisers:
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Project Leader - Rachel Kent
Team - Aysley Pix, Victoria Duffield, Anna Mawe, Chris Banks and Frank Toal.
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Establishing practical guidelines for exercise in insulin treated diabetics.

**Dr Ann Redgrave, Dr Ian Gallen, Zoe Hudson.**

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**Introduction:**

Practical Guidelines for Exercise in Insulin Treated Diabetics – a prospective cohort series of Insulin Treated Diabetics using a simple questionnaire and continuous glucose monitoring (CGMS) to assess the influence of specific guidelines on blood sugar levels before, during and after exercise.

**Background:**

Scientific literature suggests that if a diabetic on insulin can achieve euglycaemia during exercise the metabolic response to exercise is normalised. Problems occur both during and post exercise due to swings in blood sugar that are aggravated by the diabetic’s response to these swings.

**Objectives:**

The principle objective was to establish practical exercise guidelines for insulin treated diabetics that could be used as a safe reference by diabetics themselves and sports physicians/general practitioners. The guidelines were set to minimise the swings into hyperglycaemia and hypoglycaemia commonly seen in diabetics during exercise. A secondary objective was to assess whether use of the guidelines could approximate the blood sugar of the diabetic during exercise to that of the non diabetic during exercise.

**Design:**

Using a cohort of insulin treated diabetics the efficacy of practical exercise guidelines were assessed before, during and after exercise using a simple questionnaire and continuous interstitial glucose monitoring.

**Subjects:**

Nine insulin treated diabetics were recruited from a diabetic sports clinic in the Buckinghamshire Hospitals NHS Trust, which took referrals from anywhere in England. Two non diabetic, elite athletes were recruited for comparison.

**Results:**

On questioning 86% of subjects reported a reduction in exercise associated hypoglycaemia and 28% reported an improvement in exercise performance when using the Guidelines. There was a narrowing of the glucose oscillations in 85% of the subjects studied however the difference in the recording of interstitial glucose outside the range of 4-10 mMol/L before and after using the exercise guidelines was statistically not significant $p > 0.05$ ($p = 0.058$).

**Conclusions:**

The outcomes of this study suggest that these Guidelines are effective clinically in reducing blood sugar oscillations during exercise in insulin treated diabetics; however the outcomes were not statistically significant probably as a result of the small sample size. Further study with a larger sample size is merited to validate these Guidelines further.
The differences in plantar loading between 3 positions related to the rugby scrum.

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Objective:
Foot injuries cause a significant absence from training and playing in the English rugby premiership. Pressure analysis gives information on how load is distributed, to give clinically relevant information this must be carried out in sports specific tasks. The aim of this study was to identify peak areas of pressure in the foot during 3 different positions related to the rugby scrum and their association to lower limb kinematics or stud formation.

Methods:
Twenty-four male athletes were recruited from an English Premiership Rugby Club. An inner sole was inserted into the rugby boot to collect information on plantar pressure, the foot was divided into 8 sections which were used to determine loading patterns. Three positions considered to be functionally relevant were studied, standing, engaged with a scrum machine and maximally pushing against the scrum machine. The Foot Posture Index, the weight bearing lunge test, first metatarsal extension and the number of studs were assessed.

Results:
The medial forefoot showed the greatest load in the engaged and push positions (p<0.05). Foot Posture Index was negatively correlated to forefoot pressures in standing (p<0.05). Increase range of weight bearing lunge allowed for greater posterior lateral plantar loading during pushing (p<0.05). Stud number was positively correlated to medial plantar pressure in standing and pushing (p<0.05).

Conclusion:
The substantial load on the medial forefoot in the rugby scrum suggests potential mechanisms for metatarsalphalangeal injury. Stud placement, foot posture index and range of weight bearing lunge can all influence plantar pressure. Future research should investigate mechanisms to reduce load in peak regions during the rugby scrum.

Keywords:
Insoles; plantar pressures; rugby; scrum; foot injuries;
A prospective cohort study of vertical pressure on hands of sitting volleyball players using Tekscan pressure mat.
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**Introduction:**
Current sports medicine knowledge of sitting volleyball injuries in the UK is poor. This prospective pilot study looks at vertical pressures exerted on the hands of sitting volleyball players in controlled movements and compares them to a prospective survey of blister incidences.

**Method:**
The pilot study was conducted in Mile End Hospital, London. Using Tekscan F-mat 3150, the researcher recorded peak vertical pressure on volunteer sitting volleyball players. 12 months prospective survey collected demographic data and blister incidences on player volunteers.

**Results:**
Data from pressure readings generated a geographical model of typical peak pressures on the hand. The data from the prospective survey generated a geographical map of blister hotspots. The locations of peak vertical pressure correlated with blister hotspots on the hands. Pressure readings from the small volunteer group showed highest peak pressure reading over the proximal aspect of the palm - hypothenar eminence. Real time trajectory of the centre of force was between pisiform and scaphoid of the thenar hypothenar eminences in large portion of the real time trajectory path before transferring to the 2nd and 3rd fingers via the metacarpalphalangeal joints. The lack of recruitment numbers for the pressure readings reduced the accuracy of the data such that the results were more descriptive in nature.

**Conclusion:**
Indication from this pilot study suggests that sitting volleyball hand movements can be assessed using gait analysis techniques with a pressure sensitive mat. Further research is recommended.
An exploration of the hydration strategies of the runners of the 2010 London marathon by questionnaire.

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QMUL Sports and Exercise Medicine Dept.

Background:
There have been several recorded fatalities due to Exercise-associated hyponatraemia (EAH) attributed to excess fluid intake by marathon runners. A significant proportion of runners finishing marathons have been found to be hyponatraemic, mainly due to inappropriate fluid intake.

Objective:
To explore the hydration strategies of marathon runners, their sources of information and knowledge about fluid intake on marathon day and their understanding of hyponatraemia.

Design:
Anonymised questionnaire.

Setting:
The London Marathon Registration.

Participants:
A random sample of 217 runners registering for the marathon.

Results:
93% of the runners had read or been told about drinking fluids on marathon day. The majority of competitors had a plan regarding fluid intake prior to, during and after the marathon. 83.9% said that they knew enough about what and how much to drink on marathon day. However, 34% planned to drink a volume large enough to put themselves at higher risk of EAH. Only 21% knew the volumes of water and sports drink bottles from which they planned to drink during the marathon. 20.7% were planning to take a drink from all 24 water stations. Only 25% planned to drink according to their thirst as recommended by the international Exercise-associated hyponatraemia conference consensus statement.

68% of runners had heard of hyponatraemia or low sodium levels, but only 35% had a basic understanding of its cause and effects.

Conclusions:
Runners of the 2010 London Marathon lack knowledge about appropriate fluid intake on race day. A significant proportion of participants have drinking strategies that put them at risk of EAH. Runners need to be more effectively educated about safe fluid intake prior to future London Marathons.
Objectives:
Resveratrol, a natural polyphenolic flavonoid antioxidant is known to have numerous health benefits and to act as a potent anti-inflammatory substance. This study was undertaken to investigate the inflammatory responses and delayed onset of muscle soreness after the London Marathon, and whether it is altered by Resveratrol.

Design and setting:
Double placebo-controlled randomised trial conducted at the London Marathon, 2010.

Methods:
7 healthy male athletes were recruited for the study. Participants were randomised to either Resveratrol or Placebo. The Resveratrol group was treated with 600mg Resveratrol daily for 7 days immediately before the marathon. Blood was taken 48 hours before the marathon and 18-32 hours after the marathon. Samples were analysed for White Blood Cell Count (WBC) and C-reactive Protein (CRP). To assess delayed onset muscle soreness a VAS score was taken at the same times as the blood samples. The pre-post changes were compared between the groups using the Mann-Whitney-U test.

Results:
There was no significant difference between the two groups in terms of changes occurring between pre and post tests for WBC, CRP or VAS, [p=0.857, 0.629 and 0.70 respectively].

Conclusion:
This pilot study could not find a difference in immune response or delayed onset of muscle soreness between Resveratrol and Placebo after the London Marathon 2010. Further investigations are needed with longer treatment time and higher doses, analysing additional parameters like Interleukins for a possible effect of Resveratrol on the inflammatory response due to extensive exercise.

Keywords:
Resveratrol, Marathon, Immune Response, DOMS
The additional effects of swiss ball use during the wall squat exercise on lower limb muscle

Ms E Hind

Objective:
To investigate whether the addition of a swiss ball to the wall squat exercise has any effect on the levels of lower limb muscle activity, when the squat is performed at 60°, 90° and 110° of knee flexion.

Design:
An observational study with repeated measures design.

Methods:
14 healthy subjects performed the wall squat exercise to 60°, 90° and 110° of knee flexion, with and without a swiss ball. EMG muscle activity was collected from vastus medialis, vastus lateralis, rectus femoris, semitendinosus, bicep femoris, internal oblique, gluteus maximus and gluteus medius. Codamotion bi-lateral gait set-up marker protocol was used to enable the EMG to be referenced to position. The Wilcoxon Signed Rank test was used to determine whether the addition of the swiss ball resulted in any significant changes in muscle activity. The Friedman test was used to identify whether there was a significant difference in muscle activity between the 3 angles of knee flexion used during the test.

Results:
The addition of the swiss ball to the wall squat exercise resulted in a reliable significant increase in muscle activity of vastus medialis at 60° and 90° of knee flexion, vastus lateralis at 60°, 90° and 110° of knee flexion and semitendinosus at 90° of knee flexion.

Conclusion:
The addition of the swiss ball to the wall squat exercise does increase muscle activity of the some of the lower limb muscles. However, the effects appear to be dependant on the muscles investigated and the angle of knee flexion to which the exercise is performed. The swiss ball cannot be generalised as a means of increasing lower limb muscle activity during the wall squat but does play a role in increasing the muscle activity of vastus medialis, vastus lateralis and semitendinosus.
Current practices in determining return to play following head injury in professional football.

Dr J Price.

Objective:
To investigate the awareness of English football team doctors of the “Consensus in Sport” guidelines for the assessment and management of concussion. And to identify whether teams are following these recommendations and adhering to best practice.

Method:
A questionnaire was sent to Club Medical Officers for all the 92 English Football league teams.

Results:
The majority (55.6%) of teams in the English FA do not routinely follow the CIS guidelines. One third are still using outdated fixed periods of abstinence following a concussion.

Conclusions:
FA players are not being treated at standards recommended by International sporting organisations. The endorsement of the CIS guidelines by the FA would ensure that all medical teams have a sound and safe protocol for managing concussed players and making return to play decisions.

Keywords:
Concussion; Football; Return to Play
The effectiveness of prolotherapy in the management of recalcitrant medial tibial stress syndrome: a pilot study

Dr M Curtin.

Objective:
To study the effectiveness of dextrose prolotherapy in the treatment of recalcitrant Medial Tibial Stress Syndrome (MTSS).

Design:
A prospective case-series.

Setting:
A London private hospital.

Participants:
Seven patients: five male and two female; (mean age = 36 years+4 months) referred to a specialist tertiary referral centre having failed existing care pathways for MTSS.

Intervention:
Subjects received a subperiosteal injection containing 15% Dextrose solution via a BD spinal needle 22GA 3.5 IN (0.7 x 90mm) under ultrasound guidance. Typically a 1ml volume of the dextrose solution was injected per centimetre of symptomatic area of the tibia using a 20ml syringe, giving set and three-way tap.

Study period:
11/2009-7/2010

Main outcome measures:
Subjects completed a visual analogue scale (VAS) for average pain (where 10 = severe pain and 0 = no pain). Scores recorded at baseline, one, two and four weeks post-injection and again during telephone follow-up (mean 18 weeks, range 13-36 weeks). Subjects were also reviewed at least once in a follow-up appointment where they also completed a symptom diary. At final telephone follow up they completed a six-point Likert global improvement scale, and a five-point activity scale.

Results:
All subjects reported a marked improvement in their symptoms. There was a significant decrease in mean average pain measured by VAS scores at four weeks (p <0.05) and 18 weeks (p <0.05) compared to baseline. The median VAS average pain score improvement per subject was 4/10. The median change in activity value at 18 week post-injection follow-up was a score of 4.0 representing a return to a desired level of sport but not to pre-injury level. The median Likert global improvement score at 18 weeks post-injection follow-up was 2.0 which represented “much improved” on a six-point scale. There were no adverse events.

Conclusions:
Dextrose prolotherapy injection resulted in tangible symptom improvement in seven patients with painful recalcitrant MTSS. Controlled trials of this intervention are warranted.

Keywords:
Injections; MTSS; Prolotherapy; Sports injuries; Syndrome; Tibia.
Muscle activation patterns in football code athletes with chronic groin pain; A Case control study.

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Background:
Groin pain is a common injury amongst football code athletes. The repetitive turning, twisting and kicking involved in such sports place supra-physiological stresses through the pelvic region. It has been suggested that rehabilitation of chronic groin pain requires specific sequencing of muscle activation to be effective. This has been identified as being a difference in subjects with groin and sacroiliac joint pain during lower limb movement.

Aims:
The aims of this paper were to; (i) identify any differences in muscle activation before and during an active straight leg raise between football code groin sufferers and controls, and to (ii) highlight any differences in muscle activity between the symptomatic and asymptomatic sides in the groin sufferers before and during an active straight leg raise.

Methodology:
Nine subjects with groin pain and nine matched controls (matched according to age, weight and height) were used. Surface electromyogenic (EMG) electrodes were placed on six bilateral muscle groups – Rectus Femoris, Biceps Femoris, Adductor Longus, Internal Oblique, Multifidus and Gluteus Medius. Movement was qualified with an active motion tracking system, while the subject lay on two force plates and performed an active straight leg raise manoeuvre. EMG, force and pelvic motion was analysed to demonstrate any muscle activation differences between the symptomatic and asymptomatic group.

Results:
A significant difference was found between the symptomatic and asymptomatic limbs in both ipsilateral and contralateral Adductor Longus muscles (p<0.03, p<0.01), both ipsilateral and contralateral Gluteus Medius muscles (p<0.02, p<0.04) and ipsilateral Rectus Femoris (p<0.02) at initial onset of movement. During the movement, a significant difference was found between the control and case groups (both symptomatic and asymptomatic side) in the ipsilateral and contralateral Internal Oblique muscles (p<0.05, p<0.04) and the ipsilateral Adductor Longus (p<0.01).

Conclusion:
This study has shown that there are differences in the muscle groups supporting the pelvis during lower limb movement. Of this study’s findings, the most notable was that the Gluteus Medius and Adductor Longus muscles showed decreased activity in the groin sufferers group. The Adductor Longus decrease correlates with current literature, however the decreased activation of Gluteus Medius suggests that this muscle group should be integrated into the groin rehabilitation.

Key Words:
Groin, pelvic stabilisation, motor control, Electromyography, pelvic pain
Physiology of Cold water immersion: A comparison of cold water acclimatised and non-cold water acclimatised participants during static and dynamic immersions.

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Michael Tipton ², Jim House ², Heather Lunt ².
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² Department of Sports and Exercise Science, University of Portsmouth, UK.

Introduction:
Drowning is the third leading cause of accidental death worldwide. Many deaths from immersion in cold water are wrongly attributed to hypothermia. Humans can survive numerous hours in cold water, as seen in open water swimmers who complete endurance swims for many hours at low water temperatures. Previous studies performed on cold-water swimmers have shown distinct physiological differences in those regularly exposed to cold water compared to controls. The aim of this study was to identify whether regular cold water swimmers exhibit physiological adaptation to cold water immersion in static and dynamic conditions.

Method:
A prospective case-control study, where participants were immersed in cold water (12°C); once during a static immersion and once during a swimming (Dynamic) immersion. Six Cold Water Acclimatised (CWAI) participants were matched to six Non Cold Water Acclimatised (NCWAI) participants for body fat percentage and gender for both the static and dynamic immersions and mean changed between the two groups compared.

Results:
CWAI participants show a decreased metabolic rate leading to fall in core temperature during static immersion. In dynamic immersion, deep body temperature is maintained with little increase in metabolic heat production.

Discussion:
CWAI participants show a hypothermic-type adaptation during static immersion in cold water. In contrast, an insulative-type adaptation is seen during dynamic immersion in the CWAI participants. The onset of shivering is delayed by adaptation to cold water. Insulative adaptation benefits the cold water swimmer as there is little or no increase in metabolic heat production. The swimmer can maintain their core temperature without wasting vital energy.

Conclusion:
CWAI participants exhibit different types of adaptation depending on the type of immersion experienced.
Why be active?: A qualitative study on the attitudes and beliefs concerning exercise of 11 - 14 year old school children in Slough.

**Dylan Morrissey, Steph Hemmings, Amandeep Dosanjh.**

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**Rationale:**

Obesity is a growing problem in the U.K. The problem of obesity is also affecting children and with that come significant health, social and economic concerns. Lack of physical activity in children is evident. Physical activity is also beneficial for tackling obesity as well as other positive health and lifestyle outcomes.

**Aims:**

We aim to investigate what children understand by the term exercise and what facilitates and prevents them from being active or taking part in sport and exercise.

**Subjects and Methodology:**

Qualitative study using focus groups in 11-14 year old school children in Slough to identify their attitudes and beliefs towards exercise. Children were selected from a local slough grammar school.

**Results:**

Several themes were identified which were facilitative or perceived as barriers towards exercise. It was interesting to further discover differences in the barriers between the female and male groups and participants from ethnic minorities.

**Conclusion:**

By understanding the beliefs and attitudes towards exercise of 11-14 year old children in Slough we may be able to develop and improve behavioural interventions to encourage exercise in this group. Further study into the barriers and facilitators of adolescent girls and ethnic minority children may be important to develop participation of the groups in physical activity.
Injuries Patterns amongst Professional Golfers. An International Survey

Dr C Barclay.

Background:
Golf is a popular sport played worldwide. The majority of Professional golfers work as teaching Professionals based at golf clubs. All Professional players spend numerous hours on the golf course, placing themselves at increased risk of injury. There have been no recent, large studies investigating injury patterns amongst male and female Professional golfers.

Objective:
To investigate the frequency, types and mechanism of injury sustained by male and female Professional golfers and to compare injury patterns between touring and teaching Professionals.

Methods:
Injury data was analysed from 526 Professional golfers recruited through the Professional Golfers Association (PGA) database. A web based survey was conducted focusing on injury frequency, location and mechanism and any subsequent time or income loss.

Results:
Seventy percent of the study population were full time teaching or club Professionals and 5% were full time touring players. Overall 66% had sustained an injury during their Professional career and 31% had injured themselves within the last year. There were no significant gender differences (x² = 0.25, P = 0.62). The most frequently injured sites were lower back (44%), wrist (44%), elbow (23%), neck (20%) and shoulder (19%). Men were 2.5 times more likely to sustain a lower back injury than women (Odds Ratio 2.53). There was no relationship between the number of hours spent playing golf and likelihood of injury (x² =17.30, P-value = 0.16). Most players took time out from playing golf (72%) and received physiotherapy following injury (83%).

Conclusion:
The majority of Professional golfers will sustain an injury at some point during their career. The back and wrist are the most commonly injured sites. There were no differences in the frequency or types of injury sustained by touring and teaching Professional golfers.
Effect of anabolic steroid, IGF-1 and loading on expression of genes involved in collagen metabolism in bovine extensor tendon.

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Background:
Tendon ruptures have been linked to anabolic steroid usage, suggesting pathological changes in tendon structure due to steroid intake. Anecdotal reports from athletes suggest a protective effect of GH on tendon, especially in those who use anabolic steroids.

Aim:
To investigate how administration of IGF-1, anabolic steroid and combination of the two affect the expression of genes involved in collagen metabolism.

Methods:
Fascicles were harvested from bovine extensor tendons: n = 4 to calculate optimal loading and n = 8 to assess hormone plus optimal loading effect on 8 genes involved in collagen metabolism. Total RNA was extracted and mRNA expression analysed by quantitative real-time reverse transcription-polymerase chain reaction, normalised to GAPDH and 18S ribosomal RNA ± control (Con).

Results:
Maximal collagen expression occurred at 6 hours of light exercise, following 1 hour of heavy loading. One tendon failed to have RNA extracted and was therefore removed from the study (n = 7). IL-6 expression was significantly higher than control when exercised fascicles were exposed to: a) anabolic steroid (normalised to: 18S; GAPDH; 18S & Con and GAPDH & Con); b) IGF-1 (normalised to: GAPDH; 18S & Con and GAPDH & Con); c) DMEM & PenStrep (normalised to: 18S & Con and GAPDH & Con) and d) anabolic steroid & IGF-1 (normalised to: 18S & Con and GAPDH & Con).

Conclusion:
The results of this study suggest that tendon is an IL-6 producing region during exercise which may also contribute to IL-6 increases in plasma during exercise.
Structural changes in the Achilles tendon in response to a marathon: Ultrasonographically detectable changes immediately and at 2 weeks post-marathon.

Dr A Tardioli.

**Background:**
The Achilles tendon undergoes prolonged, repetitive, submaximal loading during endurance running. The acute effects of endurance running on the Achilles tendon are unclear.

**Hypothesis:**
Structural abnormalities and Doppler flow are common in highly trained endurance runners. A marathon may lead to acute structural changes in the Achilles, including change in diameter and increased Doppler flow.

**Study design:**
Prospective Cohort study

**Methods:**
41 Achilles tendons in 21 marathon runners were examined with grey-scale and colour Doppler ultrasound before and immediately after the London Marathon, 2010. 6 females and 15 males, mean age 40years (±13) were included. 17 tendons were re-examined at 16 days (±1.6) post-marathon. Anteroposterior diameter (mm), grey-scale pathology (present, absent) and Doppler flow (present, absent) were measured.

**Results:**
Mean race time was 03:45hrs (±33mins). US examination revealed 14 of 41 tendons (34%) had abnormalities before the marathon. After the marathon, mean tendon diameter decreased significantly in both normal and abnormal tendons (53mm to 47mm, p=0.005). Tendon diameter returned to pre-marathon thickness after 16 days (±1.6 days). Doppler flow was present in 7 of 41 tendons (17%) before the race. This did not significantly increase in direct response to the marathon (p=0.41). There was an association between abnormal tendons and faster marathon times (p=0.005).

**Conclusions:**
About 1/3 of the runners had structural abnormalities at baseline which did not increase immediately after the marathon. AP tendon diameter significantly decreased in normal and abnormal tendons immediately after the race. Tendon thickness appears to return to baseline at 2 weeks post-marathon.
Longitudinal development of physiological characteristics in elite young males.

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Background:
Cross-sectional studies examining training effects on development of performance variables have been confounded by growth and development changes. In order to examine the relative contribution of training, there was a need to collect ‘growth’ data longitudinally.

Aims and objectives:
The purpose of this study was to examine age- and maturity-associated variation in longitudinal physiological characteristics development in elite and non-elite adolescent males.

Methods:
Longitudinal measures of peak \( \text{O}_2 \) substaximal \( \text{O}_2 \), and power output in 11 elite, (13.7 - 17.8 years), and 5 non-elite males (13.1 - 17.6 years), over 2 or 3 consecutive years were examined. Maturity was assessed using Tanner’s (1962) indices of secondary sexual characteristics.

Results:
Sum of skinfolds remained the same in the elite group yet increased in the non-elite. Peak \( \text{O}_2 \) was greater in the elite males by 9.1 ml.kg\(^{-1}\).min\(^{-1}\), with no change in age. Oxygen uptake at 10.6 km.h\(^{-1}\) declined by 1.2 ml.kg\(^{-1}\).min\(^{-1}\) per yr in each group. Percentage peak \( \text{O}_2 \) at the same running speed was 12 % lower in the elite and declined by 1.3 % each year in both groups. Blood lactate concentration was 1.5 mmol.l\(^{-1}\) lower in the elite males compared to the non-elite, however there was no decline with age. Peak and mean power output increased disproportionately in the elite group, with percentage fatigue increasing similarly.

Conclusion:
Body fatness increases across adolescence in the untrained male. Peak \( \text{O}_2 \) remains stable throughout adolescence but is characteristically higher in elites either as a result of strenuous training or genetic endowment. Running economy improves with age in both elite and non-elite but does not appear to be related to training status. Short-term power output shows a disproportionate increase with age in the elite male athlete compared to the untrained contemporary, which may have been influenced by differences in body composition between groups.
Achilles tendon thickness, ultrasound signs and symptoms in skaters, gymnasts, elite soccer players, club athletes and healthy sedentary adults - a cross-sectional study.


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Background:
Little is known about differences between various sports in terms of Achilles tendon pathology and ultrasonographic findings. An improved knowledge of these differences may help to shed light on possible aetiological factors and guide multi-sport sports medicine support.

Aim:
The aim of this study was to compare Achilles tendon pathology, ultrasound signs and mid-tendon thickness between healthy sedentary controls, gymnasts, skaters, athletes and soccer players.

Methodology:
111 controls, 40 elite gymnasts/tumblers, 17 elite skaters, 25 elite soccer players, and 25 club athletes of mean (SD) age 21.7 (10) years were recruited. The existence of lifetime and present Achilles tendon symptoms were recorded. Mid tendon longitudinal thickness, hypoechoic areas and neovascularisation were determined with high-resolution ultrasound. Chi square tests were used to compare sports groups for pathology and US signs, and ANCOVA for tendon morphology.

Results:
Both tendons from each participant were included in the analysis. Groups differed in terms of the existence of present symptoms (p<0.001), symptoms ever (p<0.001), hypoechoic areas (p<0.001) and neovascularity (p<0.001). After adjustment for gender, age, lifetime Achilles pathology, height and weight, the groups also differed (P<0.001) in mid tendon thickness (Table 1). Post hoc tests showed significant differences in thickness between tendons of controls and gymnasts, controls and soccer players, gymnasts and skaters, gymnasts and athletes, soccer players and skaters, and soccer players and athletes.

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<td>Present symptoms (% of tendons)</td>
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<td>Past symptoms (% of tendons)</td>
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<td>35</td>
<td>11.8</td>
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<tr>
<td>Hypoechoic areas (% of tendons)</td>
<td>5</td>
<td>10</td>
<td>0</td>
<td>58</td>
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<tr>
<td>Neovascularisation (% of tendons)</td>
<td>0.5</td>
<td>3.8</td>
<td>0</td>
<td>14</td>
<td>20</td>
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<tr>
<td>Mid tendon thickness*</td>
<td>(cm) 0.48 (0.01)</td>
<td>0.53 (0.01)</td>
<td>0.437 (0.03)</td>
<td>0.546 (0.02)</td>
<td>0.480 (0.02)</td>
</tr>
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</table>

*estimated marginal mean (SE), adjusted to age 21.7, height 167.7cm and weight 62.8kg

Conclusion:
There were considerable inter-sport differences in Achilles tendon pathology and ultrasound findings. Gymnastics, athletics and soccer appeared to have higher risk of Achilles tendinopathy symptoms and ultrasound signs than skaters and controls, implying more vigilance in these Sports. Gymnasts and soccer players also have greater tendon thickness, which may be related to greater pathology as all participants with present symptoms had greater tendon thickness (P=0.04).

Connor A, Hemmings SJ, Maffulli N, Morrissey D.

Background:
Cardiovascular disease (CVD) and associated mortality is more common in British South Asians than in the white population. Aspects of cardiovascular risk profile are thought to be established in childhood; most of which are modifiable.

Objectives:
The aim of this pilot study is to compare cardiovascular risk profiles in South Asian British and white British adolescents, and to investigate the effect that physical activity, cardiorespiratory fitness and nutrition has on risk profile in both ethnic groups. The examined cardiovascular risk factors included systolic and diastolic blood pressure; anthropometric measures; and fasting glucose, cholesterol and triglycerides.

Methods:
Physical activity was assessed from 7-day accelerometry data, and diet from a 3-day dietary record. Fitness was measured using a sub-maximal incremental treadmill test and a maximal uphill treadmill test, which assessed sub-maximal exercise lactate response and peak oxygen uptake respectively. Bio-electrical impedance was used to calculate body composition, and pin-prick blood samples were taken for fasting glucose, cholesterol and triglycerides. Height, weight and hip/waist girth were measured.

Results:
Systolic blood pressure in British Asian adolescents was 6.93mmHg higher (95% CI: 0.48mmHg to 13.4mmHg) than their white counterparts; following multi-factorial adjustment this difference increased to 12.42mmHg. Fasting blood triglycerides were 1.04mmolL^-1 (0.52 mmolL^-1 to 1.57 mmolL^-1) higher in Asians; however significance in difference was lost following adjustment for dietary factors. The South Asian diet contained 42 grams/day (23.2g to 61.6g) more fat. One gram increase in daily fat intake was associated with a 0.081 and 0.0028 higher BMI in Asian and white groups, respectively.

Conclusions:
Differences in cardiovascular risk profile between white and South Asian males are present in adolescence. Interventions should target these areas in childhood in order to reduce CVD in adulthood.

Key terms:
Ethnicity, cardiovascular risk, adolescent
An epidemiological survey of injuries in male professional golfers; a retrospective questionnaire study.

Shoaib Q, Langdown B, West S, Perry M, Morrissey D.

Objectives:
The primary aim of this study was to identify the frequency and severity of musculoskeletal injuries in professional male golfers, and their perceived causes. The secondary aims were to identify any differences between the different types of professional golfers in terms of injury, and to investigate the effect of warming-up on injury.

Method:
A retrospective questionnaire-based study was conducted, using a self-administered online questionnaire. Responses were collected from 461 male professional golfers registered with the PGA. Data collected included information on injury characteristics and golf demographics.

Results:
The study found a total of 1407 injuries in 461 golfers, an average of 3.05 injuries/player. 25.0% of players reported sustaining an injury in the previous 12-months. The lower back was the most frequently injured site (30.3%), followed by the wrist (19.8%), neck (12.3%) and elbow (10.5%). Overuse injuries were the most frequent, accounting for 66.1% of reported injuries. 30% of injuries were mild and resulted in less than 7 days absence from sport, 34.2% were moderate (7 days-1 month absence) and 35.9% were severe (> 1 month absence). Those who spent 10 minutes or more warming-up averaged 3.79 injuries/player, compared to 2.69 injuries/player in those who spent less than 10 minutes warming up. Statistical analysis showed no significant differences between teaching and club players in number, severity or anatomic distribution of injuries.

Conclusion:
Injury was most likely to occur in the lower-back, followed by the wrist. Golf injuries are typically overuse problems, suggesting time spent playing is the most important factor for injury.

Keywords:
Professional, golf, injuries.
The effects of activity on Doppler flow in Achilles tendinopathy.

Grewal S, Chan O, Malliaras P, Morrissey D.

**Background:**
A relationship has been identified between vascularization on Doppler ultrasound and Achilles tendon pain. However its exact nature is unclear and the immediate impact of activity on this relationship has not been previously studied.

**Aims:**
The primary aim was to identify the relationship between activity and Achilles tendon Doppler flow. The secondary aim was to assess if symptomatic and asymptomatic tendons differed in this relationship.

**Methodology:**
Participants were recruited aged between 18-65 with and without chronic Achilles tendinopathy. All subjects were subjected to two different activities (a two minute step test and one minute calf raises) and Doppler measurements were taken at rest and after each activity. Presence of Doppler flow was measured using a semi quantitative scale (Chan scale) and quantitatively (pixel number). Results- A total of 10 tendons from 7 symptomatic participants (3 bilateral) were compared to 12 asymptomatic tendons from 6 asymptomatic participants. Doppler flow was present in 90% of symptomatic tendons and 0% of asymptomatic tendons. After scanning within one minute of the termination of calf raises, Doppler flow decreased significantly in pixel number in all tendons that showed flow originally (p=0.043). After scanning within one minute of termination of stepping, Doppler flow decreased significantly in pixel numbers in all tendons that showed flow originally (p=0.025). No flow was registered in the asymptomatic tendons after activity.

**Conclusion:**
Immediately after activity, Doppler flow appears to decrease in subjects with Achilles tendinopathy. In asymptomatic subjects no change in flow after activity was detected.

**Key terms:**
Achilles tendinopathy, Doppler, activity, exercise
Multidisciplinary collaboration in delivering a weight management initiative: A mixed methods evaluation.

Aderotimi T, Hemmings S, Morrissey D.

Objective:
To explore the experiences of the multidisciplinary team and the participants involved in the Weight 2 Go! Programme, as well as utilising quantitative outcome measures to assess the success of the program.

Methods:
Mixed methods: qualitative semi-structured interviews and data collated at set intervals on outcome measures including weight, waist circumference, six minute walk test, and scores on the Hospital Anxiety and Depression Scale and Dietary Instrument for Nutrition Education (DINE).

Results:
Quantitative outcomes, except the DINE fibre score showed no significant changes. The strengths of the programme were that it was collaborative, peer led and tailored. Challenges faced involved recruitment of participants and funding. Overall all respondents viewed the programme positively.

Conclusions:
Although outcome measures need further definition, qualitative assessment shows that a peer led community intervention supported by a multidisciplinary team is a potential mode of weight management.

Key Terms:
Weight management, multidisciplinary, peer-led, community based, mixed methods.
Effect of high-volume, image-guided injections on shoulder impingement: a retrospective study of effect.

Ghazlan A, Chan O, Malliaras P, Morrissey D.

**Background:**
Shoulder impingement syndrome (SIS) is common with a high prevalence (~50%). High-volume, image-guided injections (HVIGI) have recently been developed as a promising treatment, but little evidence currently exists of their efficacy.

**Objectives:**
To determine the retrospective efficacy of HVIGI in the management of SIS for patients in one specialist centre.

**Methods:**
Postal questionnaires were sent to 18 patients (10 male; 8 female) of mean age 48.5 years (range 30.7-60.9 years). The patients had been diagnosed with SIS between January 2008 and January 2010, and were subsequently treated with a single HVIGI consisting of anaesthetic (Marcain®), steroid (hydrocortisone), and saline, carried out under ultrasound guidance. Two questionnaires, the SPADI and a general questionnaire, were sent to these patients several months after the treatment, who were asked to retrospectively evaluate how they had felt one week before the treatment and 3 weeks after the treatment.

**Results:**
14 out of 18 participants responded (78%). SPADI scores decreased from a mean (SD) of 95.64 (23.02) one week prior to the HVIGI to 35.50 (26.53) points three weeks post-HVIGI (p<0.001). 12 out of 14 patients (86%) showed a clinically significant improvement of ≥ 10 SPADI points three weeks post-HVIGI, of which 10 patients stated ≥ 50% overall improvement.

**Conclusion:**
HVIGIs are an effective treatment in the short-term management of SIS. Further prospective RCT studies with longer-term follow-ups are required.

**Key terms:**
Shoulder impingement, high-volume, HVIGI, SPADI
Low-density high-surface-area electromyography of the calf muscles during concentric and eccentric loading and gait.


Background:
Electromyographic (EMG) recordings of large muscles are often made with single electrodes, which may not truly reflect the overall muscle activity, despite standardised placement procedures. Recent work has shown that high density EMG recordings, over a small area, yield extra information about motor unit action potentials, but it is not known if recordings over a wide area yield extra information. Further, no work has been done on dynamic contraction.

Objectives:
The purpose of this study was to show whether there is a pattern of EMG output over an entire muscle during gait and concentric and eccentric plantarflexion movements. The alternative hypothesis was that the extra information would not just be a scaled version of a single signal.

Methods:
9 healthy subjects performed a series of heel drops, heel raises and 15 second walks. 16 EMG channels were attached to the calf and an active motion tracking system was used for motion analysis. Qualitative and quantitative analysis was completed using Matlab and SPSS where a false colour map was produced and statistical analysis was performed.

Results:
The qualitative analysis has shown that there is an EMG output pattern that is repeated every exercise cycle for all exercises. There was no clear pattern between subjects however, showing subject individuality. Quantitative analysis within single subjects showed main effects for electrode position (p < 0.05) and stride point (p=0.017). Most importantly, a significant interaction between stride point and electrode position was observed, therefore enabling us to accept our hypothesis.

Conclusions:
This approach seems appropriate to measure muscle activity with movement for the entire muscle belly and does add additional information to studies with single electrodes, with movement being a feasible subject for study.
The association between pedometer-determined physical activity and obesity in British south Asian boys.

Kandasamy R, Hudson Z, McNamara O.

Objectives:
The main objective was to measure the association between physical activity and each of four body composition measures in 11-12 year old British South Asian boys in Tower Hamlets. The secondary objective was to define overweight and obese levels using each of the four body composition measures.

Methods:
140 male students took part in the study. Data were collected on body composition derived from 1) skinfold thicknesses (biceps, triceps, subscapular and suprailiac); 2) bioelectrical impedance analysis; 3) body mass index; and 4) waist circumference. Students were also asked to wear a pedometer for one week.

Results:
Boys took fewer steps [mean (sd): 11741 (4554)] than the recommended guidelines of 15,000 steps. Boys took greater weekday step counts [12142 (5129)] than at weekends [10395(5199)]. Total activity levels and weekday activity levels did not correlate significantly with any of the body composition measures, but weekend activity levels correlated significantly and negatively with waist circumference (ρ= - 0.37, p=0.034). Bioelectrical impedance analysis tended to overestimate obese levels relative to other measures, with 53.3% of children designated obese with this measure, compared to 17.8% with BMI, 22.1% with waist circumference and 15.9% with skinfold thicknesses. Nevertheless, a strong correlation (r= 0.708 to 0.916, all p<0.001) was found between all body composition measures.

Conclusion:
British South Asian boys in Tower hamlets are less active than recommended levels. Lower activity was related to a greater waist circumference in these children. The cross-sectional data preclude causal assumptions, and further longitudinal studies are required. Nevertheless, since greater waist circumference has been shown to relate strongly to cardiovascular morbidity in later life, measures to increase activity levels in these children would seem warranted.

Key Terms:
Pedometer, Skinfold Thickness, Body Composition, Ethnicity, Children
An *in-vitro* study investigating the effect of Traumeel® S on myoblast damage and viability following oxidative stress by hydrogen peroxide.

Carruthers D, Pollock N, Morrissey D, Screen H.

**Background:**
Traumeel® S is a homeopathic treatment which has demonstrated benefits in treating soft tissue injuries in a clinical setting. However, there has been limited research exploring these effects at a cellular level and no published studies have been done on myoblasts.

**Objectives:**
The aim of this study was to build on preliminary evidence and assess the effectiveness of Traumeel® S on damaged myoblasts *in-vitro*.

**Methods:**
Myoblasts were damaged using hydrogen peroxide. The study was split into two experiments: one to assess viability, the other to measure reactive oxygen species (ROS). In the viability experiment two different assays were used: CellTitre-Blue® and ‘CellTiter 96® AQ one solution’. Both determine the number of viable cells using colorometric dyes which are reduced by living cells into stable products detected by a multiwell plate reader. ROS levels were detected with fluorescence microscopy and photographs were taken, which were then compared qualitatively.

**Results:**
The results showed that Traumeel has no effect on myoblasts damaged by hydrogen peroxide. Importantly, Traumeel did not adversely affect the cells reducing viability or increase the amount of ROS.

**Conclusion:**
This *in-vitro* study has shown that Traumeel has no protective or therapeutic effect on myoblasts affected by oxidative damage.
Influence of the contraction mode on the tendon structure: Rat model.


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Introduction:
Tendinopathies are common in sport and affect both upper and lower limbs. Eccentric rehabilitation is a successful way of treating them and now is becoming the “gold treatment”. Although clinical results are very favorable, beneficial morphological and histological effects have not yet been elucidated. The aim of our experiment was to determine if there exist any intrinsic modifications in a tendon trained in concentric or eccentric modes, in a rat model.

Methods:
18 rats were divided into 3 groups: 6 for the control group, without physical restraint; 12 for a training of 1 hour, 3 times a week, for 5 weeks, at a speed of 17m/min (1km/h), on an inclined treadmill: 6 rats running uphill at +15° for the concentric effort (group C) and 6 rats running downhill at -15° for the eccentric effort (group E). After this training period, the Achilles, patellar and tricipital tendons of both limbs were surgically removed in all 18 rats. Tendons taken from five rats of each group were subjected to a tensile test up to rupture using a “cryo” jaw. Tendons of the remaining rats of each group were subjected to a histological study.

Results:
The results showed significant changes in group E only: (1) an increase of the force required to rupture the patellar and tricipital tendons; (2) an improvement of the ratio between the force necessary to rupture the tricipital tendon and the body mass of the rats; (3) an increase of the surface area of the section of the tricipital tendon. No significant change was observed as far as constraint was concerned between groups. Histologically, we saw, in the group E, more peripheral blood vessels and a greater proportion of collagen.

Conclusion:
This study showed that the mechanical properties of tendon tissue are enhanced by eccentric training. Tendons become stronger, the amount of collagen increases and there is probably more interaction between collagen fibers (mechanotransduction).

Keywords:
Tendinopathy, eccentric rehabilitation, mechanotransduction.
Achilles tendon tear treatment through transcutaneous suture.


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Introduction:
The Achilles tendon is the widest tendon of the human body, measuring 5-6 cm long, 1.2-1.5 cm width and 0.5-0.6 cm thick.

Achilles tendon belong to the extrasinovial tendons group and this allows it a faster recovery, thanks to local hematoma from the paratendon, necessary for the cicatrization.

During the time it’s been used many treatment methods, from the orthopedic treatment to various surgical techniques. We used in Achilles tendon tear treatments the majority of the presented and recommended methods by the spatiality literature. In a certain number of cases, in every method we encountered different incidents that leaded to unsatisfactory results.

Methods:
From our experience we concluded that in Achilles tendon tear treatment it is essential to maintain the tendon covering skin integrity, the peritendon integrity, to maintain the local hematom formed during and after tendon tearing, reattaching the ruptured tendon heads and maintain them in this position by suturing them and by relaxing the sural triceps muscle. Starting these findings we imagined and respected all these conditions by transcutaneous suturing of the ruptured Achilles tendon. This method requires five pairs of mirror micro incisions (5 mm) on one side and the other of the tendon. It is obligatory for one of the pairs to be placed to the tear level. With a surgical needle we arm the proximal and distal heads of the tendon by different threads. By traction and muscular relaxation we bring in contact the two ruptured heads and then we knot together the arming threads. The micro incisions were sutured with one thread and then the inferior member was gypsum immobilized in relaxing position for the sural triceps muscle for a 40 days period.

Results:
Using this technique we have operated 15 cases in our clinic. In all the cases, we obtained a healing by first intention of the tegument micro-incisions. After the gypsum immobilization suppression, during 30 days the patients were in a recovery program. At the end of this program they have recovered completely the dorsal and plantar flexion and the walking. To mention that on 4 months after the surgery the esthetic of the area is completely restored, this technique being the only surgical technique that realizes this recovery. The patients treated through this technique have postoperative periods between three months and one year. They are having a normal life.

There was only one case in which the patient presented an anaesthesia on the lateral side of the foot on the sural nerve territory. Three months later the accuse disappeared.

Keywords:
Achilles tendon, transcutaneous suture
Aspects of anthropometric and morphofunctional cardiac parameters in a lot of junior football players.

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Introduction:
Physical exercises and sport activity induce myocardium and vascular tree important functional and morphologic adjustment changes, which mostly explain the aerobe performances improvement.
The present work studied the anthropometric and morphofunctional cardiac parameters in 30 junior football players, with ages between 10-18 years, during specific training period.

Methods:
In order to appreciate the athletes anthropometric profile, that have been measured the height, the weight, the body mass index, the thoracic perimeter and the Erismann harmony index.
Was recorded the electrocardiograms for the 12 classic derivations using the HEART 112D device and also the blood pressure and the heart rate values. The parameters obtained through echocardiography using the SIEMENS Acuson CV/70 device were: the cardiac cavity diameters, the cardiac volumes, the ejection fraction and the interventricular septum dimensions.

Results:
The results were compared with the ones of a 30 subject control group, having the same age but not practicing any performance sports.
Anthropometric measurements reveal that 32.5% of the sportsmen were underweight, 62.5% had a normal weight and the other were overweight. The thoracic diameters were moderately statistically correlated (r = 0.42) with a slight increase of left ventricle telesystolic and telediastolic volumes.
The cardiac volumes were within studied age specific limits, being correlated with the presence of pulmonary regurgitation and ejection fraction (r = 0.78).

Conclusions:
The effort practice by the professional junior football players ameliorates the anthropometric parameters, but also the morphofunctional cardiac ones.

Keywords:
Anthropometry, echocardiography, football.
Effects of acute exercise on pupil size.

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Introduction:

Pupillometry is an established method for the evaluation of autonomic nervous system activity. Many factors are known to affect pupil and acute exercise is believed to increase pupillary size. PURPOSE

Purpose:

The aim of this study was to clarify the relationship between acute exercise and changes in pupil size.

Methods:

Twenty healthy subjects (11 men, 9 women) with mean age 28.2±2.1 years volunteered to participate in this study. All subjects underwent three pupillometric measurements in both eyes with single flash stimuli of 24.6 candela/m² intensity and 20ms duration: at rest, at peak of maximal bicycle exercise testing and at recovery phase. The studied pupillometric parameters were: baseline pupil radius after 2-min dark adaptation (R1), minimum pupil radius after pupil’s reaction to light (R2), latency for the onset of constriction (T1), maximum constriction velocity (VCmax), maximum constriction acceleration (ACmax), time for maximum velocity (T2), time for maximum constriction (T3), amplitude which is set as the difference between R1 and R2 (AMP, R1-R2), the constriction ratio (AMP%) and 3.5 percentage recovery- redilation (R%). Moreover, heart rate (HR), and both systolic (SBP) and diastolic (DBP) blood pressure were measured.

Results:

At peak exercise HR, SBP and DBP were significantly increased by 146.7% (p=0.01), by 45.7% (p=0.01) and by 33.5% (p=0.02), respectively. Concerning the pupillometric results no significant difference was observed in any pupillometric parameter at the three measurements. Also, statistical analysis showed no correlation between hemodynamic responses and pupillary variables for all measurements.

Conclusions:

Although HR, SBP and DBP were increased during maximal exercise as a consequence of catecholamine secretion by the suprarenal glands, changes in pupil size were not observed. Our results indicate that exercise as a stimulus did not affect pupil size.

Keywords:

Pupillometry, acute exercise, autonomic nervous system
A novel marker protocol for 3-dimensional kinematic analysis of the golf swing, and the study of lead-hip and pelvic rotation in elite and amateur golfers.


Background:
Three-dimensional motion analysis is ideal for assessing the detail of golf-swing kinematics. In order to better understand injury mechanisms, it is necessary to develop a database of normal swing kinematics for elite and amateur golfers, for which protocols do not yet exist.

Objectives:
The initial objective was to assess the feasibility of a whole body motion analysis protocol. The main objective was to identify differences in swing kinematics between amateur and professional golfers.

Methods:
The golf swing of 26 healthy right-handed male amateur golfers (>5 handicap) were recruited from Queen Mary University of London, and the data compared with that of 36 right-handed male professional golfers. A novel motion analysis protocol was used to measure lumbar and lead leg kinematics in particular.

Results:
Amateur golfers displayed reduced lead-hip and pelvic ranges of motion throughout the golf-swing compared to professional golfers in all planes. Similar rotational velocities and swing patterns were found in the primary plane of movement only, with the two other planes of movement at each segment being highly variable in amateurs while being highly regular in professionals. Of particular importance, given the recent findings of reduced lead leg medial rotation on golfers with low back pain was a significant reduction in lead hip range of motion in amateur golfers compared to professionals (t=6.82, p < 0.01).

Conclusion:
The novel Visual-3D marker protocol was able to analyse swing kinematics adequately to enable measurement of kinematic data relevant to injury investigation therefore setting the scene for improved understanding of the link between the golf swing and pain presentation.

Keywords:
Golf swing; Kinematics; Low back pain; Hip rotation
Macronutrient intake in adult elite male Greek athletes: a meta-analysis of data.

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Introduction:
Although the importance of proper nutrition in sports performance has been dispersed during the last decades, several studies have demonstrated that even elite athletes fail to meet dietary macronutrient requirements.

Methods:
A thorough literature and internet search was performed and 10 studies were identified, all aiming in describing macronutrient intake in adult, elite, male, Greek athletes. Selection criteria also included studies taking place during the competition period and that dietary analysis did not refer to a match/competition day. The selected studies included athletes from several sports like basketball, soccer, water-polo, volleyball, cycling, marathon, track and field, rowing, windsurfing, cross-country skiing, swimming and weightlifting and the majority of the sample competed in the national teams. Random model meta analysis with unequal variance was performed. Symmetry in the funnel graphs indicated the studies for exclusion in each analysis.

Results:
The forest plots revealed that mean dietary protein intake of the sample (n=309) reached 1.7g/kg of body weight (BW), daily carbohydrate intake was 4.7g/kg of BW (n=478) and consumption of fat reached 36.7% of the total energy intake (TEI) (n=294).

Conclusions:
Elite Greek male athletes appear to consume adequate amounts of protein, but inadequate amounts of carbohydrate according to the ACSM position statement. In addition, they consume fat in excess (>35% of the TEI). As far as protein is concerned, although mean intake is within the proposed range of 1.2-1.7g/kg of BW, the range in the protein intake of the sample was large (1.4-1.9g/kg BW), indicating that several athletes overconsume protein. The results reveal that elite athletes underestimate the importance of carbohydrate and are in need for nutrition education.

Keywords:
Diet; nutrition; protein;
Athletes’ knowledge about micronutrients.

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The nutrition of athletes has been of interest to scientists for decades. Today there are scientific proofs that an adequate dietary habits influences in a large extent an athlete’s health, body composition, and energetic pathways during the activity as well as during the competition or recovery. Athletes should be well informed about the food groups, caloric intake, and daily meal schedule. Micronutrients are very important part of nutrition. Vitamins and minerals are important for many vital functions and specially for energetic pathways.

The aim of this investigation was to evaluate the knowledge of athletes about these supplements.

For that purpose a questionnaire with 13 questions directly connected with the knowledge about vitamins and minerals was used on a sample of 156 athletes (86 males and 70 females) participating in different sports. Mean age was 23.6±2.3 years. Survey was anonymous and the data obtained were analyzed by statistical software STATISTICA for WINDOWS.

The athletes in our investigation do not differ from the athletes in different investigations all over the world. 52.2% of them are taking vitamins as supplements (more female athletes 63 : 43%) once or twice a week. Minerals are just a little less in use (46.4%, men 47 : women 43%). Despite these rather great percentages when it comes to reasons for taking micronutrients, it seems that athletes do not have sufficient knowledge about micronutrients. It is interesting that only 37% of athletes know that vitamins and minerals are not sources of energy for muscle work. Only 49% of athletes know that vitamin C is helping the absorption of Fe from food and 60% of them think that the main source for Fe is spinach. It is surprising that even 87% think how vitamin C can prevent cold.
Lumbar x-ray, CT and MRI in athletes: frequency of degenerative findings.

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Aim:
The athletic activity of the adult Greek population has increased markedly in the last 30 years. To evaluate the possible long-term effects of such activity on the cervical and lumbar spine, we studied a group of asymptomatic currently active lifelong athletes over age 35 (35-65 years old, mean age 55).

Material-Methods:
40 (20 male 50%, 20 female 50%), lifelong athletes from Crete were studied with x-ray, CT, MRI and the results compared with previous imaging studies of other populations. An athletic history and a spine history were also taken.

Results:
Evidence of asymptomatic degenerative spine disease was similar to that seen in published series of other populations. Degenerative changes including disk protrusion and herniation, spondylosis, and spinal stenosis were present and increased in incidence with increasing patient age. In this group, all findings proved to be asymptomatic and did not limit athletic activity.

Conclusion:
The incidence of lumbar degenerative changes in our study population of older male athletes was similar to those seen in other populations.

Keywords:
Athletic activity, lumbar spine, asymptomatic degenerative spine disease
Low back pain in athletes - elements of functional anatomy.

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Introduction:
Low back pain is a common complaint of athletes, and accurate diagnosis is essential, since many causes of back problems can lead to disability. If the obvious mechanical causes, such as muscle strain, "kissing spines," and leg-length inequality, have been ruled out, the more serious sources of low back pain, such as disk herniation, Scheuermann’s disease, compression fractures of the vertebral body, and stress fractures of the posterior elements, should be considered. Treatment goals for all these disorders include pain relief and prevention of further injury.

Aim:
Aim of this study was to evaluate and to present the basic elements of functional anatomy of low back pain in athletes

Results-Conclusions:
The vertebrae are separated by vertebral discs that are composed of a gel substance surrounded by outer collagen fibers, which are arranged in a crossed manner. These discs are further supported by the anterior and posterior longitudinal ligaments. Together, the vertebral disc complex resists spinal compression. During axial rotation of the spine, the annular fibers are placed at a mechanical disadvantage. Furthermore, in forward flexion, the anterior vertebral endplates approximate, increasing the pressure of the disc posteriorly. The most common disc herniation is directed posteriorly toward the foraminal window, where the nerve roots exit the spinal canal. As such, a common mechanism of herniation in athletes is combined flexion, rotation, and compression of the spine. There are some sports in which this injury mechanism commonly occurs. In the presence of a disc herniation, forward flexion worsens the herniation. In extension, the opposite occurs. The posterior vertebral endplates approximate, forcing the disc anteriorly, to reduce the herniation. The anatomic structures that have been implicated as pain generators include the vertebral discs, nerve roots, ligaments, zygapophysial joints, sacroiliac joints, and the musculature. Some studies suggest that discogenic pain secondary to annular disruption is the most common cause of LBP vascularized granulation tissue with innervation along a torn annulus fibrosis is thought to be the cause. Inflammatory factors caused by the leakage of nuclear material from annular tears can delay intradiscal tissue healing. These factors include matrix metalloproteinases, phospholipase A2, cyclooxygenase, prostaglandins, nitric oxid, cytokines, interleukins, and macrophages.

Keywords:
Low back pain, anatomy, athletes.
Cardiac death in the young in Scotland: is screening necessary?

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Introduction:
Scotland has a high rate of excessive cardiac mortality. Sudden deaths due to cardiac disease (SCD) in the young mainly due to recognised structural abnormalities or inherited cardiac disorders associated with arrhythmias and may be prevented if the underlying condition is identified. This has prompted investigation into whether cardiovascular screening should be performed in the general population or targeted in those at risk of cardiac complications associated with exercise.

Methodology:
The incidence of cardiac death including those occurring suddenly (SCD) in the young between 1986 and 2008 was studied. Data was collated on all deaths in Scotland in persons under the age of 35 years obtained from the Information Services Division (ISD) of the Scottish Government. The primary cause of death reported on the death certificate was used and cardiovascular deaths were coded using the ICD coding for circulatory causes of death (ICD9 codes 390-459, ICD10 codes I00-I99).

Results:
In total, 41 049 deaths aged 0-35 years were recorded. Of these deaths, 3004 were due to cardiac causes, with 2188 occurring in hospital and 816 occurring out of hospital and being classed as SCD. Over half of cardiac deaths (56.6%, 95% CI: 54.5-58.7%) in hospital were due to congenital malformations, with coronary heart disease accounting for 13.0% (95% CI: 11.6-14.5%) and cardiomyopathies 6.4% (95% CI: 5.4-7.5%). In contrast, CHD is the most prevalent SCD (41.8%, 95% CI: 38.4-45.2%). Congenital malformations account for 3/4 less than in hospital at 15.0% (95% CI: 12.6-17.6%), and cardiomyopathies account for more SCD’s than in hospital (10.3%, 95% CI: 8.3-12.6%). Arrhythmias account for 4% of deaths, both in and out of hospital.

Conclusions:
The relatively small numbers of deaths due to structural abnormalities and inherited cardiac disorders in Scotland, suggest that preparticipation screening remains controversial. Instead, it may be more advantageous to target those at high risk.
Practical implications of changes to WADA doping control rules in doping practice in Scottish football.

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Objective:
To examine the results of doping control tests conducted by Scottish Football Association during the seasons 2004-2005 to 2009-2010 and to relate sample production to the practical rule changes made by WADA during this period. In addition, medications taken and declared during the doping control programme were studied.

Methods:
642 test results were analysed during a 6 year period. The time taken to produce the urine sample, the influence on the volume required and the increasing role of out of competition testing were studied as well as the influence of the introduction of strict specific gravity (SG) rules for urine concentration values.

Results:
Despite the required volume of urine samples being increased from 50 ml to 90 ml, the time to completion of standard in competition (IC) testing was similar during the period of study (1 hour 3 minutes in 2004-5 to 1 hour 4 minutes in 2009-10). The time for sampling in out of competition (OOC) testing was shorter than IC (40 v 64 minutes p<0.05). There were more split and repeat samples required due to the production of over dilute samples following the new strict SG sample parameters S.G.>1005 (4.25% to 14.4%. P<0.05). The increased time for sampling due to SG changes were 43 minutes OOC g and 34 minutes for IC.

There was a high incidence of medication and supplements ingested in the week prior to both OOC and IC testing. 29-38% of players had taken at least one and 12-23% had ingested at least two agents. A small number (n=4) ingested up to five substances. 24-385 had taken NSAIDs and 15-22% had ingested analgesics.

Conclusions:
The changes made by WADA have impacted in a modest way on the doping control system with further player education required regarding supplements.
Low-density, high surface area electromyography of the hamstring muscles during running and kicking.


**Background:**
Surface electromyography (sEMG) is used extensively in the assessment of hamstring muscle activity. Conventional sEMG techniques may not fully represent overall muscle activity, despite clinically standardised placement of electrodes. High density EMG provides more information about biopotential activity but it is limited to signal collection over a small surface area. Our work proposes a low density high surface area EMG method to analyse muscle biopotentials over an entire muscle belly.

**Objectives:**
To assess whether there is a pattern of EMG output over an entire muscle during running and repeated kicking.

**Method:**
16 channel EMG and motion analysis data were collected for 10 healthy volunteers during treadmill running at 10km/hr, and kicking a football. Active infra-red motion analysis instrumentation was used to register limb segment movement with the raw time series EMG signals. Each EMG channel was subjected to Windowed Fourier Transform for construction of a false colour map for the hamstring. Each EMG and motion analysis channel were analysed by ANCOVA.

**Results:**
Visual analysis showed that different areas of the hamstring muscles are active at different points in the running cycle independently of each other. Quantitative analysis within a single subject showed main effects for electrode position and stride point (p<0.001) during running. A significant interaction between stride point and electrode position was noted.

**Conclusion:**
Results suggest the presence of an EMG activity pattern showing consistent variation within stride-point and channel location during running. A larger subject group is needed to further investigate EMG patterns in kicking. The scope for further research using the results of this paper as a foundation is vast, with the future inclusion of wireless EMG, electrode arrays and custom garments. The findings may lead to an application in a screening, rehabilitation and diagnosis setting.

**Keywords:**
Electromyography, Running, Kicking, Hamstrings muscle, Motion analysis
Variability of Kinematic and Kinetic Gait Data in Ambulatory Children with Spastic Cerebral Palsy with and without Fixed Ankle-Foot Orthoses using 3D Motion Analysis: A Quantitative Prospective Study.


Background:
Spastic Cerebral Palsy (SCP) is a common neurological disorder causing inadequate motor-control and functional gait pattern. Fixed ankle-foot orthoses (FAFOs) have become a widespread conservative therapy in SCP. Gait of these children exhibits a large degree of within-child variability but few studies have investigated this variability in terms of kinematics and kinetics and no studies address how this variability is affected with the use of FAFOs.

Objectives:
To compare intra-patient variability of kinematic and kinetic gait parameters between a sample of ambulatory children with SCP and two healthy children with normal gait. The secondary aim was to assess if these variability profiles change in the SCP children as a result of FAFO application.

Methods:
4 SCP and 2 normal ambulatory children, aged 5-15, were recruited and underwent active instrumented gait analysis over a 6 week period. Variability of a measure was defined as the standard deviation of the measure within one child over several repeated gait trials.

Results:
Variability of sagittal-plane pelvic, hip, knee and ankle range of motion (all P<0.01) and sagittal internal hip and knee extensor moments (both P<0.05) were shown to be consistently greater in SCP than that of age-matched children. AFO application reduces sagittal kinematic variability at the pelvis, knee and ankle (all P<0.05) and variability of sagittal hip and knee moments (both P<0.01).

Conclusions:
Children with SCP exhibit significantly higher kinematic and kinetic variability compared to the normal population. FAFOs have the potential to reduce this variability and functionally improve gait. Future studies should utilise larger sample sizes and stricter inclusion criteria taking into account the differing clinical severities of spasticity, FAFO designs and patterns of CP involvement to ensure these are generalisable findings.

Key Terms:
Spastic Cerebral Palsy/ Kinematics/ Kinetics/ Fixed Ankle-foot Orthoses/ Intra-patient Variability
Evaluation of an Inter-Professional Multimedia Musculoskeletal Examination Teaching Resource: A Qualitative Study.

C Griffin, C Chung, V Tzortziou-Brown, D Morrissey*.

Background:
Inter-professional education (IPE) has been used more frequently in the last thirty years to encourage collaborative teamwork within healthcare.

Objectives:
The aims of this study were primarily to assess the impact of multimedia instruction on musculoskeletal clinical examination (MCE) skill acquisition. Secondly, to evaluate students’ perceptions of the value of IPE and multi disciplinary team (MDT) work.

Method:
A survey was administered to a purposively sampled group of post-graduate students, comprising medical practitioners and physiotherapists (n=26). The sample was diverse in age, speciality, and MDT and IPE experience. The intervention was four sports injury assessment DVDs made by expert clinicians modelling high level inter-professional team working, made specifically for use in the study. Post-intervention semi-structured interviews, conducted with a sample from the survey group (n = 10) until data saturation occurred, were audio-recorded and analysed by thematic content analysis (TCA).

Results:
An 85% survey response rate was obtained. 46% of the group described their competence in MCE as ‘developing skills’ and 50% described having ‘some experience’. Attitudes towards IPE and MDT work were highly positive; overriding beliefs were that they benefited practice by affording a range of learning opportunities. Interview analysis revealed five main themes: a real time approach with expert instruction; multiple perspectives; and diversity within the cohort; changing behaviour by improving MCE technique and enhancing interactive skills. Overriding beliefs were that observing and learning from different experts’ skilful examination under real time conditions was perceived as largely beneficial across the whole group.

Conclusion:
This study provides evidence that inter-professional learning amongst post-graduate students can result in skill development – such as advanced assessments skills. Furthermore, the DVDs improved students’ appreciation of IPE, healthcare teamwork, and awareness of other disciplines. The use of DVD learning tools to teach and assist with the delivery of MCE and IPE warrants further investigation.

Keywords:
Inter-professional education; musculoskeletal; multimedia; learning; skills
Are asymptomatic ultrasound abnormalities in the Achilles tendon of elite soccer players risk factors for symptoms one year later? A longitudinal cohort study.

Jhingan S, Perry M, O’Driscoll G, Ahmad M, Maffulli N, Morrissey D.

Background:
Achilles tendinopathy is common and can bring a sports career to a premature end. Identifying players at an increased risk of this debilitating condition could lead to better prevention.

Objectives:
The primary aim was to compare asymptomatic elite soccer players with and without baseline ultrasound changes in terms of development of Achilles tendinopathy symptoms at one year follow-up. This study also investigated the effect that baseline tendon thickness had on development of symptoms.

Method:
Using ultrasonography of the Achilles tendon, 18 initially asymptomatic elite soccer players in the top English league were examined in April 2009 and in May 2010. Symptom development during the 12 month follow-up period was assessed with an Achilles tendinopathy questionnaire on follow-up. Any Achilles pain during the follow-up period, of any duration or severity, was deemed to represent symptom development.

Results:
No association between the existence of baseline asymptomatic ultrasound signs and development of Achilles tendinopathy symptoms in the following year was observed (Chi-Square, 1.180 p=0.277). Baseline calcaneal insertion thickness was greater in tendons that experienced symptoms (p=0.035) in the following year compared to those that remained asymptomatic.

Conclusion:
Baseline calcaneal insertion thickness was identified as a risk factor in the development of Achilles tendinopathy in elite soccer players. However, follow-up studies should aim to establish whether abnormal ultrasound signs and thickness measures over a longer period of time are significant markers of a pre-symptomatic stage.

Key terms:
Achilles tendon, tendinopathy, ultrasound
Changes in the symptoms and ultrasound signs of Achilles Tendinopathy during a twelve week course of loaded eccentric training: A pilot study.

Jangra A, Perry M, Maffulli N, Malliaras P, Morrissey D.

Background:
Twelve weeks of eccentric exercise has been shown to be a useful therapy for Achilles tendinopathy, but little is known of the time-course of recovery, or the nature of any structural changes during therapy.

Objectives:
To assess the time-course and pattern of Achilles tendon symptoms, thickness, stiffness, and ultrasound (US) signs during 12 weeks of eccentric exercise (EE).

Methods:
5 subjects of age range (mean) 38-52 (46) years with main-body AT were included. For each subject, serial measurements of VISA-A score, the presence of neovascularisation and grey-scale US signs within the tendon, and the thickness of the Achilles tendon at 3 points were recorded for the first three weeks of a twelve week EE programme.

Results:
Median VISA-A score increased from 48.5 to 54.5 (p=0.116). Median mid-tendon thickness decreased from 0.834cm to 0.790cm (p = 0.107). A trend towards a decrease in tendon thickness was noted directly superior to the retrocalcaneal bursa and at the soleus myotendinous junction (S-MTJ). Neovascularisation, paratenon blurring and hypoechoic areas improved in 1/3, 1/3 and 2/5 tendons respectively. No significant change occurred in median tendon stiffness.

Conclusion:
3 weeks of EE do not produce significant changes in AT symptoms and tendon thickness or stiffness, but improve ultrasonographic signs and neovascularisation in some subjects. The non significance of findings may be a type II error and further work with larger sample sizes is planned.

Key terms:
Achilles, tendinopathy, eccentric, symptoms, ultrasound
Arterial stiffness before and after moderate intensity exercise in athletes and controls: a cross-sectional observational study.


Background:
Arterial stiffness is an independent predictor for cardiovascular disease and mortality. There has been no previous research comparing the acute effects of exercise on arterial stiffness in resistance and endurance athletes. This information would help to reveal how arterial function responds to exercise training.

Objectives:
To measure and compare arterial stiffness and hemodynamic variables in resistance athletes, endurance athletes and controls, before and after moderate intensity exercise.

Methods:
Central and peripheral Pulse Wave Velocity (PWV) was measured using Doppler ultrasound and calculated by the “foot to foot” method before and after exercise. PWV was initially measured at rest for a 1 minute period. Thereafter subjects cycled for 30 minutes at moderate intensity (60% of maximum heart rate, based on age). PWV was measured at post-exercise intervals of 3, 15 and 30 minutes. Blood pressure and heart rate measurement preceded all PWV measurements.

Results:
Controls were significantly younger than both athletic groups (p <0.05). Groups did not significantly differ in resting PWV. There was no change in central/peripheral PWV after exercise in the resistance and control groups. Central PWV significantly increased post exercise in endurance athletes (mean (sd) resting PWV: 8.0 (2.0) m/s; 3mins post exercise: 10.5 (4.0) m/s; p=0.027, 95% CIs: 0.30 to 4.42) and recovered to resting values by 15 minutes. Systolic blood pressure increased significantly (p<0.05) in the endurance group from 136 (16) g at rest to 151 (13) 3 minutes after exercise.

Conclusions:
PWV in the endurance group significantly increased after exercise, possibly due to the concomitant rise in blood pressure. However, PWV did not change in response to exercise in the resistance or control groups. Lack of significant differences between the groups may be explained by problems with ultrasound measurement and a small sample size in the resistance group.

Key terms:
Pulse wave velocity, arterial stiffness, resistance athlete, endurance athlete
An evaluation of the relationship between Vitamin D status and quadriceps strength in patients with COPD: a cross sectional study.

Fenn J, Martineau A, Wai Yee J, Islam K, Griffiths C, Maffulli N, Morrissey D.

Background:
Quadriceps muscle weakness is a well-defined characteristic of COPD. Vitamin D deficiency has been shown to be highly prevalent in COPD but its association with quadriceps strength in this group is unknown.

Objectives:
To investigate the effects of Vitamin D status on quadriceps strength. To validate measurements of quadriceps strength by handheld dynamometer (HHD) against the gold standard isokinetic dynamometer (IKD) in a sub-population.

Methods:
30 patients with COPD Gold Stage II and above were recruited. Quadriceps muscle strength was tested using the HHD in all subjects. 8 of the subjects were also tested using the IKD for validation purposes. Vitamin D status and a range of potentially confounding measures were assessed. A multivariate analysis was performed to determine which variables were associated with quadriceps strength.

Results:
A very strong and positive correlation ($r=0.92$, 95% CI $0.86$ to $0.95$, $p<0.0001$), existed between the HHD and IKD measurements. Serum 25-hydroxyvitaminD was not associated with quadriceps strength ($r=0.17$, $p=0.20$). The male gender ($\beta\ 36.7$, 95% CI $14.0$ to $59.4$, $p=0.002$) and pack year history ($\beta\ -0.15$ 95% CI $-0.2$ to $-0.05$, $p=0.003$) were independently associated with quadriceps strength.

Conclusions:
The portable and inexpensive HHD is a valid method of testing quadriceps strength in patients with COPD. Serum 25-hydroxyvitaminD is not associated with quadriceps strength in patients with COPD, although male gender and a decrease in pack year history are significantly associated.

Keywords:
Vitamin D, quadriceps strength, dynamometer, COPD
The effect of eccentric and concentric loading speed on the normal Achilles tendon: an in vivo biomechanical study.

Sweeney E, Chaudhury S, Screen H, Woledge R, Bader D, Maffulli N, Morrissey D.

Background:
Tendinopathy is a common and disabling condition that can end an athlete’s career. Eccentric loading has proven to be an effective treatment measure for tendinopathy. However, current evidence is unclear regarding the optimum speed for eccentric loading.

Objectives:
To compare the effects of two different speeds of eccentric and concentric loading on Achilles tendon force and muscle activation in healthy volunteers.

Methods:
9 healthy volunteers (4 male, 5 female, age range 19-24) performed eccentric and concentric heel raises/drops at two speeds, in a random order. Motion analysis, force plate and EMG data were collected in order to measure Achilles tendon force and muscle activation.

Results:
The effect of speed on Achilles tendon force was not significant (P=0.74) but the effect of contraction type was significant (P<0.05). There was a significant difference between eccentric and concentric loading on EMG output for gastrocnemius medialis, lateralis and soleus (P<0.001 for all) but there was no significant effect of speed (P=0.05, 0.32, 0.06 respectively). For tibialis anterior and fibularis longus there was a significant effect of speed on EMG (P<0.001 for both) but not of contraction type (P=0.10, 0.30 respectively).

Conclusion:
There is no effect of speed on Achilles tendon force and the effect of speed on EMG activity is only significant for tibialis anterior and fibularis longus, therefore mechanical challenges to the tendon that are speed dependent are not likely to be due to force magnitude. The differential effects on muscle training may be significant. Further studies in patients are warranted.

Key terms:
Achilles tendon, speed, eccentric loading, concentric loading
Introduction:
Exercise and obesity (EO) and sports and exercise medicine (SEM) are important topics in today's society and musculoskeletal medicine (MSK) is already a well-established subject in medical schools. Despite the importance of these subjects, little is known about their occurrence in medical school curricula. The study aimed to investigate the availability of EO, SEM and MSK teaching in UK medical schools, opinions regarding the importance and quality of the teaching and to compare SEM and EO with MSK teaching.

Method:
An anonymous online survey was designed, piloted and distributed to the deans of undergraduate medical education at 33 UK medical schools. Reminder emails were sent to participants every 4 weeks for 4 months.

Results:
The response rate was 76%. All medical schools have a direct focus on MSK in their curriculum. 68% have a direct focus on EO and 40% on SEM. There are more optional study opportunities in MSK. 92% of medical schools assess MSK knowledge, whilst only 60% and 28% do so for EO and SEM respectively. MSK is perceived to be more important and have better quality teaching. The most common barrier to improving education was space in the curriculum.

Conclusions:
EO and SEM teaching are uncommon and considered less important in UK medical schools compared to MSK teaching. Increasing the perceived importance of these subjects and providing curricular guidance to medical schools will help improvements to be implemented. The optional curriculum is likely to be the most appropriate initial method of increasing and improving teaching in EO and SEM.

Keywords:
Sports medicine, medical schools, teaching
Physical therapy treatment for adhesive capsulitis: clinical evidence and clinical reasoning.

Salam A, Hemmings S, Morrissey D.

Background:
Many barriers exist impeding the translation of treatment evidence into practice for adhesive capsulitis (AC). The need for evidence-based practice is unquestionable, with reasoning skills needed to evaluate and apply the evidence. This study aims to combine published evidence and clinical reasoning to optimally guide clinical practice.

Objectives:
The first is to categorize and grade the evidence for each individual physical therapy treatment modality for AC, through a literature review. This informs the second; qualitative exploration of physiotherapists’ perceptions of the evidence and its interaction with clinical reasoning.

Methods:
A systematic literature search was conducted for reviews and trials describing a physical therapy treatment for AC. Summaries of each individual modality were generated, and graded on the strength of supporting evidence. Semi-structured interviews were also conducted with experienced physiotherapists until data saturation.

Results:
The literature search yielded 26 studies, from which 19 physical therapy interventions were identified. Strong evidence exists to support the use of education, steroid injection, mobilizations, stretching, supervised exercise, home exercise, acupuncture, heat therapy, TENS, NSAIDs and interferential electrotherapy. Moderate evidence exists for 6 modalities, and limited evidence for 2. Fourteen themes surrounding the assessment, treatment, and evidence behind AC were identified from framework analysis of interview transcripts.

Conclusion:
There is relatively little high quality evidence in favour of one modality over another for AC. Until the quality and scope of evidence improves, clinicians will continue to rely heavily on their own expertise for treatment. These results are a meaningful guide to clinical practice, and reveal a number of research questions.

Keywords:
Adhesive capsulitis, frozen shoulder, physical therapy, treatment, systematic review, mixed-method, qualitative, PEDro, interview
'In it for the long run': Sources of self-efficacy in adolescent female athletes.

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Introduction:
Most research in sport psychology investigating the sources of efficacious beliefs has been conducted within the parameters of Bandura's (1977) Self-Efficacy Theory. Within the context of a situation six sources are believed to be cognitively appraised; mastery performances, vicarious experiences, verbal persuasion, imaginal experience, emotional states and physiological states, to develop one's efficacy expectations and goal directed behaviour (Feltz, Short & Sullivan, 2008). The aim of the study was to identify the sources of self-efficacy most salient to female adolescent long distant runners, why such sources are selected and whether they were interlinked.

Method:
Semi-structured interviews were conducted to allow athletes’ sources and types of efficacy to emerge inductively. Interviews were recorded, transcribed verbatim and analysed using the Interpretative Phenomenological Approach. After obtaining ethical approval, 6 female adolescent athletes (mean age = 15 years, national level) were recruited, using opportunistic sampling, from a single running club.

Results:
Nine sources emerged from this investigation with numerous variations within them being exclusive to sport and female adolescent athletes. The nine sources of self-efficacy identified were: performance accomplishments, vicarious experiences, verbal persuasion, physiological experiences, imaginal experiences, emotional states, situational favourableness, self-perception and athlete specific. Specifically, it was found that performance accomplishments provide a catalyst for the additional sources. In particular performance accomplishments inform the athlete efficacious beliefs, however this is only situational specific and is none transferable. Individual differences arose as an imperative factor in how one interprets the efficacious sources.

Conclusion:
The results extend previous conceptualizations related to personal efficacy beliefs within athletic settings and supported the contention that efficacious beliefs play a significant moderating effect on athlete functioning and athletic performance. Findings highlight the need to further examine the uses of multiple sources of self-efficacy and their weighting in individual's sports, as this may provide valuable insight for coaches and sports psychologists working with particular athlete groups and assist in developing interventions which augment or maintain efficacious beliefs in individual athletes.

Three keywords:
Self-efficacy, Sources. Qualitative.

References:
Clinical decision making and knee arthroscopy.

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Objectives:
This study aimed to identify decisions made by orthopedic surgeons about whether patients on a waiting list should proceed to arthroscopy, and to describe surgeons’ decisions.

Methods:
Surgeons were asked to Think Aloud (TA) as they made their decisions as the clinical management for patients from a previous randomized controlled trial (RCT) looking at the use of magnetic resonance imaging (MRI) for patients on a waiting list for knee arthroscopy. Audiotapes of the decision making were transcribed for analysis.

Results:
Surgeons agreed about proceeding with arthroscopy for five patients, although reasoning differed. In no cases did surgeons agree about not proceeding to arthroscopy. However, more surgeons decided not to proceed to arthroscopy than to proceed. Patients with clinically diagnosed with osteoarthritis were less likely to have chosen to have arthroscopy than those with meniscal abnormalities for which the general consensus was to proceed with arthroscopy.

Conclusions:
There tended to be disagreement between surgeons about proceeding with arthroscopy when OA was diagnosed clinically. Surgeons decisions did not reflect the decision making as reflected in the original RCT. Surgeons’ decisions were influenced by patient wishes. For some patients, the decision to proceed with arthroscopy was based solely on clinical diagnosis; MRI may not be advantageous in these instances. This study has implications for decision making in the current NHS patient choice environment. Patients may choose a treatment provider from a list of available providers at time of original clinical assessment and diagnosis. However, the treating surgeon does not necessarily re-examine the patient until the day of surgery. Given the variation between surgeons about the merits of proceeding with arthroscopy, surgeons may end up in the invidious position of providing surgery to patients whom they do not believe will benefit from arthroscopy.
The effect of loading speed on the force frequency spectrum during eccentric and concentric calf exercise.

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Introduction:
Heavy load eccentric training (ET) has been shown to be more effective than concentric training (CT) in treating Achilles tendinopathy.1,2 It is unclear at what speed ET should be performed to treat the condition with greatest efficacy. Recent studies have indicated that high frequency tendon force fluctuations may underpin therapeutic mechanotransduction, but the effect of training speed on resulting tendon vibration remains unexplored. The aim of this study was to compare tendon vibration during ET and CT at three speeds commonly employed during conservative treatment.

Methods:
24 healthy volunteers (12 male and 12 female, age = 27.8 ± 1.9 years) performed ET and CT exercises for the Achilles tendon either at a fast (loading phase = 1.5s), medium (loading phase = 3s) or slow pace (loading phase = 6s). Tendon vibration was measured by analysing the power spectra of the ground reaction force vector using a fast Fourier transform with 1Hz windows, and compared using ANOVA.

Results:
High frequency vibrations (8-13 Hz range) were greatest during fast and medium speed ET, with a mean of 15.8 N2/Hz (sd = 8.8). This was significantly greater than all other combinations of conditions and speeds (p value range across these frequencies = 0.03 – 0.001). No significant differences between any combinations of speed and loading condition were found in the 1-7Hz low frequency range (p value range = 0.11 – 0.98).

Conclusion:
The observed high frequency Achilles tendon force fluctuations during fast and medium speed ET were mostly in the higher frequency range, reflecting where physiological tremor particularly occurs. This may reflect inefficient recruitment of large motor units at high speeds, creating oscillation frequencies that are known to stimulate mechanotransduction in tenocytes. These findings were made in normal subjects and pave the way for exploration in patients with tendinopathic disease.

Keywords:
Loading, speed, frequency content

References:
A modelling approach to aid the understanding of high volume image guided injection (hvigi) in recalcitrant achilles tendinopathy.

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**Background:**
High volume image guided injections (HVIGI) have recently been shown to significantly reduce pain and improve function in patients with resistant Achilles tendinopathy. However, the mechanism by which HVIGI treatment works has yet to be identified.

**Methods:**
Subjects will be recruited from the London Independent Hospital for either open surgery for Achilles tendinopathy or for intervention by HVIGI. Tissue from the Kager's fat pad will be removed during open surgery for Achilles tendinopathy and paratendinopathy. Mechanical loading of the Kager's sample will be performed using an MTS Biomex 100 at varying applied loads in order to plot the Young's Modulus. Concurrent to this, patients undergoing HVIGI treatment will be recruited to undergo imaging by MRI scan during high volume injection to measure fluid distribution during and immediately after injection. Geometries of the tendon and Kager's fat pad will be reconstructed from images using Mimics software, which constitutes the computational domain of numerical modelling. Poroelastic theory will be adopted to model both Achilles tendon and Kager's fat pad with their distinctive parameters. Mechanical responses of the whole system will be compared before and after the injection. The fluid pressurization and resultant stress/strain distribution are crucial to understanding the working mechanisms for HVIGI.

**Results:**
Parametric studies of the injection treatment will be conducted numerically by adjusting different loading speeds and loading time intervals between injections and volumes. This is for the first time Kager's fat tissue has been mechanically characterised. In combination with poroelastic modeling, we will be able to obtain the detailed strain and stress information and injected fluid movement, which are important to understand the mechanism underlying the high volume image guided injection.

**Discussion:**
It is expected that results from this study will elucidate the unknown mechanism by which HVIGI works, particularly the effect on neovasculature associated with Achilles tendinopathy
The use of EPCs (Endothelial Progenitor Cells) for the regeneration of the musculo-skeletal system and the spine.

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Introduction:
EPCs (Endothelial Progenitor Cells) are cells that can differentiate into endothelial cells in vitro. Their importance lies on the fact that vasculature has a cornerstone role in the healing process after injury of the musculo-skeletal system and of the spine. The main target of this review is to clarify whether EPCs could be a viable alternative of MSCs (Mesenchymal Stem Cells) for musculo-skeletal regeneration.

Methods:
The literature search was performed via the internet using the Medline, Scopus and Cochrane database. The keywords which were searched in the abstracts were the terms “EPCs”, “bone”, “spine cord”, “cartilage”, “menisci”, “ligament”, “tendon” and “healing”.

Results:
Three papers reported that EPCs can differentiate into osteoblasts in vitro. In a fourth paper, EPCs were used in an in vivo model in order to enhance the fracture healing in a non union animal model. A fifth paper implies that fracture may induce mobilization of EPCs and recruitment of the mobilized EPCs into fracture sites. Another two papers showed that local transplantation of EPCs with atelocollagen scaffold is a feasible strategy for therapeutic vasculogenesis and osteogenesis needed for fracture and ligament healing. Another paper suggested that co-transplantation of hematopoietic and mesenchymal stem / progenitor cells may improve the regeneration of vascular dependent tissues such as bone, adipose, muscle and dermal grafts. Two papers reported stimulating results for the use of EPCs for spine cord regeneration.

Discussion:
The importance of EPCs for the healing of both musculo-skeletal tissue and spine is based on the advantages of this cell population for regeneration purposes: 1. Relative abundance, 2. Isolation by the circulation, 3. New insight revealing new mechanisms.
Sonographic evaluation of Achilles tendon thickness in elite track and field athletes: preliminary study.

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The purpose of the study was to measure Achilles tendon thickness in elite track and field athletes and to investigate any difference between dominant and non-dominant lower limb. Ultrasound examination of Achilles tendons was performed in 20 elite track and field athletes [12 males, 8 females; age range, 18-28 years]. A control group of 20 healthy individuals, age and sex matched, was used. The thickness of the Achilles tendons was measured in the transverse plane at the level of the medial malleolus. True tendon thickness was evaluated and it was defined as thickness perpendicular to the greatest width of the tendon. For each participant, the Achilles tendons were measured by two operators. Mean Achilles tendon thickness was 5.37±0.78 mm in elite athletes and 4.66±0.65 mm in the control group. Mean thickness of the Achilles tendon in elite track and field athletes was significantly greater than mean thickness in healthy individuals (p=0.003). A significant result was also depicted between athletes and control groups in dominant lower limbs (athletes, 5.46±0.93mm; control group, 4.71±0.57 mm, p=0.024) and in non dominant limbs (athletes, non dominant limb, 5.28±0.64mm; control, 4.47± 0.74 mm; p=0.039). In addition no significant difference was observed in mean thickness of Achilles tendon between dominant and non-dominant limbs (p = 0.454) in elite athletes as well as control individuals. Our outcome implies that Achilles tendon thickness is increased in elite track and field athletes.
Small leucine rich proteoglycans (SLRP’S) expression in skin, tendons and capsules of athletic population after shoulder dislocation and ACL injuries.

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Introduction:
Cruciate ligament ruptures and shoulder dislocations are often caused by trauma, but predisposing intrinsic factors might also influence the risk. Decorin and biglycan are members of the SLRP’s family which are important constituents of interstitial extracellular matrices (ECM) and play important roles in the regulation of collagen fibrillogenesis. Their deficiency could influence wound healing and integrity of skin and muscle. The aim of this study was to localize Decorin and Biglycan in skin, hamstring tendons and shoulder capsules.

Patients and Methods:
Localization of decorin and biglycan was studied by immunohistochemical staining of paraffin embedded sections of skin, tendons and capsules of the patients attending for shoulder stabilization or ACL reconstruction between Nov 2008 and July 2009.

Results:
40 patients were studied, 25 undergoing primary ACL reconstruction and 15 undergoing shoulder stabilization. The mean age of patients was 26 years. 34 patients (85%) were male and 6 female (15%). Most common sport played was football in 13 patients (32%) followed by rugby in 10 (25%) and skiing in 5 (12%).

Skin epidermis, blood vessels, sweat glands, sebaceous glands and arrector pili stained negative but dermis stained positive to varying degrees for decorin. Synovial surface of the capsule, blood vessels and skeletal muscles stained negative but ECM was positive to varying degrees for decorin. Tendon sheath and collagen fibers in ECM stained positive to varying degrees but skeletal muscle stained negative for decorin.

Skin epidermis, blood vessels, sweat glands, sebaceous glands and arrector pili and dermis stained positive for biglycan to varying degrees. Synovial surface of the capsule, blood vessels and ECM stained positive for biglycan to varying degrees. Tendon sheath stained negative but collagen fibers, blood vessels and skeletal muscles stained positive for biglycan to varying degrees.

Discussion:
We looked at the expression and distribution of decorin and biglycan in skin, tendons and capsules of patients undergoing shoulder stabilization or ACL reconstruction following sports injuries. There may be a link in the distribution of these SLRP’s and strength of tissues, which can predispose individuals to injuries while playing sports and can also affect healing process. Further studies are needed to study this link.
Collagen v expression in skin, tendons and capsules of athletic population after shoulder dislocation and ACL injuries.

Akhtar MA, Ingman TG, Robinson CM, Keating JF, Muir AY, Simpson H, Salter D.

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Introduction:
Cruciate ligament ruptures and shoulder dislocations are often caused by trauma, but predisposing intrinsic factors might also influence the risk. Collagen type V is widely distributed in tissues and helps regulate the diameters of fibrils of the abundant collagen type I. Mutations in its genes have been identified which can result in connective tissue fragility, particularly in skin and joints.

The aim of this study was to localize Collagen V in skin, hamstring tendons and shoulder capsules of patients following sports injuries.

Patients and Methods:
Localization of Collagen V was studied by immunohistochemical staining of paraffin embedded sections of skin, tendons and capsules of patients attending for shoulder stabilization for recurrent instability or primary ACL reconstruction between Nov 2008 and July 2009.

Results:
40 patients were studied, 25 undergoing primary ACL reconstruction and 15 undergoing shoulder stabilization. The mean age of patients was 26 years. 34 patients (85%) were male and 6 female (15%). Most common sport played was football in 13 patients (32%) followed by rugby in 10 (25%) and skiing in 5 (12%).

Skin epidermis stained negative but dermal papilla, papillary and reticular dermis, blood vessels, sweat glands, sebaceous glands and arrector pili stained positive to varying degrees for collagen V. Synovial surface of the capsule, blood vessels and extracellular matrix stained positive to varying degrees. Tendon sheath, collagen fibers, blood vessels and interfascicular connective tissue stained positive to varying degrees, but skeletal muscle was negative for collagen V.

Discussion:
We looked at the expression and distribution of Collagen V in skin, tendons and capsules of patients undergoing shoulder stabilization or ACL reconstruction following sports injuries. There may be a link in the distribution of Collagen V and strength of tissues, which can predispose individuals to injuries while playing sports and can also affect healing process. Further studies are needed to study this link.
Profound diathermy UHF in sport traumatological pathology.

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**Word keys:**

Tendon, Ultrahigh Frequency UHF, Diathermy

**Introduction:**

Profound diathermy UHF, are electromagnetically waves which create a profound therapeutic thermal increase, at a muscle, tendon, or intra joint level depending pathology or therapeutically demand.

Those are non ion sated waves that through the therapeutic profoundness achieve to enter till 8-10 cm acting on the focal point of the lesion / injury. The deepness and these results can not be reached with any microwave or short wave.

The working of the therapeutically frequency is 433.9 mHz with the potential of 150 w. Applicable in every acute inflammatory joint and chronic dystrophy, fibrosis post surgical, tendinosis, condropathy, bursitis, hematomas, joint dislocation.

With very high results from the first application through the profound thermal vasodilatation application in the tissue, creating a wide tissue oxygenation and stimulation of the segregation of collagen.

This type of technology all by herself is very resolute and doesn’t have any side effects. You can take the benefit of the application of other therapies to potency the therapeutically effect.

The application of the profound diathermy UHF, accelerates the recovery process, reduces the time of pain and reduces the rest time (of not playing sport), accelerating the reincorporation of the sport activity.

Decrease the risk of consequences.

The application of the therapy is 10 minutes it is possible to do it twice a day to accelerate the efficiency therapeutically, but then it would be enough to do it twice a week.

The healing of the pathological described above last between 10 and 20 sessions.
Anti-Doping Programme and Physicians.

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The role of physicians in supporting athletes dates from the ancient times. Since the 18th century, it can be documented the role of physicians in the “doping” of athletes with banned drugs. Today, even though governments, sport authorities and organized medicine abandon doping, a significant minority of physicians seem to continue playing a role in the doping of athletes. Several studies have shown that physicians are consulted by athletes and officials for advice on doping and the majority indicated not willing to prescribe doping substances without medical indication. Recent studies showed that the knowledge of the majority of physicians about doping agents and doping in general remains poor. Under the World Anti-Doping Programme, the revised definition of doping includes physicians in the group of persons who can fulfill the elements of a doping offence. The Prohibited List clearly specifies the substances and methods prohibited in-, and out-of-competition while the International Standard for Therapeutic Use Exemption indicates the criteria for athletes who need, for therapeutic purposes, to use prohibited substances or methods. Through their unique relation with the athletes, physicians have an important role in discouraging doping in sport. For physicians, as with athletes, it is important to closely follow the changes on anti-doping regulations.
The new strategies in the fight against doping and the protection of privacy rights.

Professor Luis Horta.

The main objectives of the fight against doping in sports are the protection of health and fair competition in the defence of clean athletes.

The fight against doping is getting more and more complex in order to cope with the increasing sophistication of the doping practices used by the cheaters.

In 1994 the IOC implemented for the first time the out of competition anti-doping controls. The idea was to prevent the use of prohibited substances and methods by athletes during the periods between competitions and the strategy of waiting for the time needed to excrete the substances or its metabolites from the body to compete. The idea was good enough but the cheaters could work around it by evading the tests during those excretion periods. In order to solve this problem, the World Anti-Doping Agency (WADA) decided to create for the best athletes worldwide a system to facilitate their localization – the Whereabouts Information System (1). This new system forced the athletes to send, for each trimester, data concerning their localization and a sixty minute time slot associated to a precise location where they had to be found in order to be tested.

The athletes have an essential right – the right to the ideal medical treatment. Sometimes they need to use prohibited substances and methods in order to achieve it. WADA established procedures and specific criteria to fulfil this essential right, creating the International Standard for Therapeutic Use Exemptions (TUE) (2). The anti-doping organisations all over the world must have TUE Committees to evaluate those exemptions. If an adverse analytical finding is determined, these TUE must be shared between the relevant organisations.

The cheaters use erythropoiesis-stimulating agents, blood transfusions and other prohibited substances and methods for the enhancement of oxygen transfer, essential for the performance in the majority of sports. Some of these substances and methods can increase the performance in up to 30%. Some of these substances and methods have a very narrow window of detection, sometimes less than 24 hours and some are even impossible to detect. WADA decided to implement the Athlete’s Biological Passport (3), trying to solve this problem. The plan was to establish biomarkers profiles for each athlete in order to monitor those parameters as indirect markers of doping, based on the fact that all drug intake causes modifications in the body, that is: to look at the consequences (effects), versus to look only at the substance itself (cause). If we monitor some blood parameters like haemoglobin, hematocrit and reticulocytes, and we create an individual profile for the athlete, we can prove a doping practise regardless of the kind of prohibited substances or methods used. The same applies to longitudinal profiles of endogenous steroid parameters in urine.

All these strategies can affect the athlete’s privacy rights. Some critics of the World Anti-Doping Program see this as problematic. To counter those critics, WADA implemented the International Standard for the Protection of Privacy and Personal Information. With this solution the proportionality principle is respected. It assures a balance between different fundamental rights: privacy on one side and clean sport and good health on the other.


So what’s really new about the ACL.

Mr John King.

This talk will be a look at the origins of ACL mythology; a snapping noise, haemarthrosis and loss of function are characteristic of ligamentous injury; 1845!

Testing for ACL laxity in near extension; 1875

Why do we test for laxity in the sagittal plane when the ACL is oblique?

Why are there thousands of papers on Pub Med if the problem is solved?

So what is new, what is hidden because we don’t read a foreign language and what does the future hold?
Predisposing factors for anterior cruciate ligament injury.

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Orthopaedic Surgeon

In sports, especially in football, one of the most common knee injuries is the ACL tear, which usually (70%) occurs through non-contact mechanisms that include; sudden deceleration, landing and pivoting maneuvers which are repeatedly performed. Studies have shown that the incidence of ACL tear in female athletes is two to eight times higher than in men athletes. The research effort to determine the risk factors for sustaining non-contact ACL injuries is increasing as concerns grow about the larger number of incidents, the greater treatment costs and the serious consequences of those injuries.

Mechanically, ACL injury occurs when an excessive tension force is applied on the ACL. A non-contact ACL injury occurs when a person generates great forces or moments at the knee that apply excessive loading on the ACL.

There are a number of studies that show that the anterior shear force at the proximal end of the tibia is a major contributor to ACL loading, while there are valgus, varus and internal rotation moments at the knee. According to these ACL loading mechanisms, a small knee flexion angle, a strong quadriceps muscle contraction or a great posterior ground reaction force can increase ACL loading.

The literature also shows that individuals at high risk have a smaller knee flexion angle during athletic tasks than individuals at low risk. Recent biomechanical studies demonstrated that female recreational athletes exhibited small knee flexion angles in running, jumping and cutting tasks. The results of other studies showed that the peak ACL strain occurred at the impact peak vertical ground reaction force shortly after initial contact between the foot and the ground.

The risk factors for non-contact ACL injuries fall into four distinct categories: environmental, anatomic, hormonal, and biomechanical.

Recently, a high level of friction between shoes and the playing surface has been identified as a major risk factor for a non-contact ACL injury in the sport of the team handball. In football, there are studies that show that more non-contact ACL injuries occur when the surface is dry. Higher levels of friction between the shoe and the surface are generally associated with better performance but a higher injury risk. That's why we see an increase of ACL tears in areas with artificial grass in football grounds.

There is a need to continue to define specific, neuromuscular, proprioceptive and motor control factors associated with injury. However, until specific predictive and protective factors are identified, training and prevention programs should continue to be implemented, assessed and improved. There is a pressing need to improve public and participant awareness of the risk of ACL injury and the possibilities for prevention.
Primary patellofemoral dislocations are common. It results from quadriceps contraction across a flexed, valgus knee with the weight bearing tibia externally rotated compared to the femur. The dislocation usually reduces spontaneously or with muscle relaxing drugs. In most patients, non-operative management produces satisfactory outcome. Conservative management focuses on concentric exercises to strengthen the quadriceps, and especially the vastus medialis, to prevent further instability. If the dislocation recurs after a trial of rehabilitation, operative intervention should be considered, with the aim of restoring the soft tissue anatomy to normal. Ninety four percent of patients suffer a tear to the medial patellofemoral ligament (MPFL) following a patellar dislocation. We perform transverse patella double tunnel technique to reconstruct the medial patellofemoral ligament using a free autologous gracilis or semitendinosus graft. Medial patellofemoral ligament reconstruction using hamstring tendon passed through a double patellar transverse bony tunnel technique is a safe, reliable management option for recurrent patellar dislocation in patients without any predisposing anatomic factors.
Football has developed enormously over the last 25 years but there is no doubt that over the same period the world around football has developed even further.

The medical world around football has been no exception to this.

In the first part of the conference I will explain how the Medical Commission of FIFA and UEFA try to answer the challenge: medicine for football.

It started with the 4 classical themes of sports medicine: traumatology, physiology, psychology and pharmacology. We should add that important aspects of nutrition, hydration and hygiene have been gradually joining this leading quartet.

Quite rightly too, another major focus has been the prevention of injuries. Over the last years, especially due to the many cases of sudden death, the importance of emergency medicine was largely emphasized.

Even more specific fields have also joined the list: for example youth football, women’s football, medical care in relation to refereeing, specific traumatology of the goalkeeper.

The globalisation of football has created new problems in the medical sector:
- What are the criteria for adaptation to jetlag?
- What medical preparation and care is needed for a team playing matches and tournaments at high altitude?
- What measures should be taken for matches played in extremely hot conditions with an obvious risk of serious dehydration?

We must also highlight the problem of the fight against doping in football. We test the presence of amphetamines, narcotics and anabolic steroids, diuretics, and peptide hormones, particularly erythropoietin and growth hormone. We are confronted with excessive use of beta-2-agonists and corticosteroids.

Looking into the future we can already detect the advent of genetic doping whereby athletes will be genetically prepared to improve artificially all former sport performances.

Our philosophy is there are three important reasons for refusing any form of doping:
- The use of doping is opposed to the ethics of sport. In a world of sports where ethical arguments are defeated every day by commercial considerations the medical world should stand firm as the first guardian of ethics.
- Doping is prejudicial to the integrity of our competitions. We must not collaborate in the organisation of football games where artificial medications take the place of natural values such as talent, training, skill, character, and endurance.
- Above all we must respect the health of the athletes.

We will discuss the importance of football for health: studies have proven that weekly practice of football is superior to many other exercises in the care for health. The importance of physical exercise, particularly by football, will be underlined as an important preventive factor in the health of people of all ages.
Physiotherapy for prevention of lower back injuries in wrestling.

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Introduction:

About 10\% of all sport injuries in wrestling occur in lower back area (2). The purpose of this report is to summarize the incidence of lower back injuries in wrestling and the mechanisms involved, and to represent our experience in physiotherapy (PT) for prevention of these injuries.

Methods:

From a sample of 95 wrestlers (males), 11 lower back injuries were found (11,6\%). Problems such as muscle and joint injuries and dysfunctions occur quite frequently. Treatment of dysfunctions begins with PT program, that emphasizes analytical stretching (1) and strengthening of the back and abdominal musculature. We allow a return to sport when the athlete has regained at least 70 percent of his viability and pain-free full range of motion.

Results:

Lower back injuries can be due to numerous factors: extensions, combined with twisting in take-downs (5 out of 11 wrestlers – 45,5 \%), extensions against resistance as in lifting an opponent off the mat (6 out of 11 wrestlers – 54,5 \%). Reduction in low back injuries was found as a result of a physiotherapy program. 8 out of 11 wrestlers who were treated from low back injuries returned to high-level competitions. In 3 cases the condition was not treated on time and it became chronic. As a result of our study, many changes have been made to the strength and conditioning training.

Conclusion:

In cases of low back injuries an early diagnosis is essential, so that treatment can be commenced as soon as possible. Preventive physiotherapy program is essential and should be included in every training program as an integral part of the warm-up and recovery.

Keywords:

Injuries, physiotherapy, wrestling

References:

Physical testing prior to returning to normal sports activity for elite athletes following ACL injury.

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SPORTSCLINIC Thessaloniki

Anterior cruciate ligament (ACL) injury is among the most frequent sports-related injuries especially in contact sports such as football, basketball, soccer and skiing. In professional sports, ACL injury has a significant financial impact on both athlete and team, since several months are required before full return to professional sport activity. At the end of the rehab program an overall assessment is taking place which traditionally includes isokinetic testing, functional tests and stability clinical assessment prior to the final approval for returning to normal professional sports activity. However, these tests do not examine whether running economy has been altered following ACL injury and rehabilitation. Deterioration in running economy will increase the physical load on the injured knee and may increase the risk for injury in the future. In addition, the traditional tests do not assess whether muscle fatigue at given submaximal and maximal loads has returned to pre-injury levels although most researchers agree that fatigue appears to have a central role in non-contact ACL injuries, since it affects most of the modifiable risk factors which are related to ACL tear such as hamstring recruitment, proprioception, lateral trunk motion, tibial rotation, knee abduction, dynamic foot pronation, ground reaction, hip abduction, balance and flexibility. In addition, fatigue can cause alterations in landing and cutting mechanics similar to the ones proposed to increase the risk of ACL tear. Based on preliminary data from our lab, these tests may be very useful for a safe return of the injured athlete to normal sports activity and for the evaluation of the rehabilitation process. These tests may include running economy assessment at low, medium and high intensities, lactate curve analysis at all intensities, lactate removal rate and cardiovascular endurance assessment.
The efficacy of frequency specific microcurrent therapy on delayed onset hamstring muscle soreness.

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Introduction:
The effects of frequency specific microcurrent (FSM) therapy versus sham therapy in delayed onset muscle soreness (DOMS) was studied to determine whether specific frequencies on two channels would produce better results than single channel single frequency microcurrent therapy which has been shown to be ineffective as compared to sham in DOMS. Frequency specific therapy is thought to operate by the effects of both microamperage current and resonance on tissues and biochemical bonds.

Methods:
18 male and 17 female healthy participants (mean age 32 +/- 4.2 years) were recruited. Following a 15-minute treadmill warm-up and 5 sub-maximal eccentric muscle contractions, participants performed 5 sets of 15 maximal voluntary eccentric muscle contractions on a seated leg curl machine. Post-exercise, participants had one leg randomly assigned to a subsensory, silent treatment of 20 minutes of frequency specific microcurrent stimulation, while the other leg acted as non-treated control with the device turned off. (see photo) Participants were blinded to the treatment but the experimenter was not. Soreness was rated for each leg at baseline and at 24, 48 and 72 hours post exercise on a visual analogue scale (VAS), which ranged from 0 (no pain) to 10 (worst pain ever).

Results:
Both groups were identical at baseline (p = 1.00). Post-exercise there was a significant difference (p=0.0005) at 24 hours in the treated (1.3 / 10 ± 1.0) versus non-treated leg (5.2 / 10 ± 1.3). At 48 hours the treated leg was 1.2 / 10 ± 1.1 versus the non-treated of 7.0 / 10 ± 1.1 (p = 0.0005). At 72 hours the treated group was 0.7 / 10 ± 0.6 and the non-treated was 4.0 /10 ± 1.6 (p = 0.0005).

Conclusion:
FSM therapy provided significant protection from DOMS at all time points tested.

Keywords:
DOMS, frequency specific microcurrent
Abstract - Friday 10th September 2010

The evaluation of the treatment of 10 cases of chronic compartmental syndrome of the upper arm.
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Introduction:
Chronic Compartment Syndrome (CCS) is a pathological situation in which there is an increase in the interstitial muscular pressure which produces a conflict of microcirculation and enervation. The main characteristic is pain and stiffness during activity with intense neurovascular symptoms.

The initial presentation is clinical with diagnosis confirmed by an intracompartmental pressure measurement (ICP) to confirm the diagnosis. Other non-invasive diagnostic techniques like RM and NIRS produce less clear results.

Conventional treatment reduces the symptoms but its application presents difficulties for sportspeople. Fasciotomy is still the treatment of choice followed by post-surgical rehabilitation, although the possibility of relapse cannot be discounted.

Materials And Methods:
10 sportspersons have been studied with SCC, diagnosed by PIC, and looked at in the medical department of CAR Sant Cugat during the period 2003-2009. Personal characteristics were: age: 31,5 years +12,07; weight: 72,4kg + 6,55; height 171,4cm+4,95; IMC 24,67+2,42; 1 woman and 9 men. The Whitesides technique was used for administering the PIC and the Pedowitz criteria for confirming the diagnosis. The treatment was evaluated using a test based on Slimon et al (2002). The patients evaluated the results as bad, medium, good or excellent. The pain was evaluated on a subjective scale of 1 to 10 together with the presence or absence of weakness, muscular contractions or paresthesia.

Results:
10 subjects diagnosed with CCS (8 flexors and 8 extensors). The latent diagnostic period was from 18,6 months ± 19,8.

Over the total 16, ten were treated with fasciotomy and 6 with conventional treatment.

Total recovery: using fasciotomy 9 vs conservative 0. Using fasciotomy, the total recuperation period took more than a year in 8 cases. Compartments with an unsatisfactory therapeutic result: fasciotomy 1, conservative 6. Two cases diagnosed as CCS without fulfilling the Pedowitz criteria due to an extended recovery time. These two cases were given conservative treatment but were not complete a good recovery.

Conclusion:
The latency diagnostic period are long
Fasciotomy comes out as the better treatment but with recovery times longer than a year in all cases except one.
The recovery time of basal pressure during the test seems a variable worth taking into account independently of the Pedowitz criteria, so for that reason we think it deserve an analysis in greater depth.

Keywords:
Chronic compartment syndrome, latency, therapeutic outcome
Abstract - Friday 10th September 2010

Platelet-rich plasma for chronic achilles tendinopathy: A double-blind randomised controlled trial with one year follow-up.

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Introduction:

Chronic Achilles tendinopathy occurs frequently and is very hard to treat. The disease involves local degeneration of tendon tissue, of which regeneration may be improved by injecting platelet-rich plasma (PRP), an increasingly used therapy for releasing growth factors into degenerative tendon. However, high-quality randomised clinical trials on this topic are lacking. The aim of this study was to evaluate the effect of a PRP injection in patients with chronic Achilles tendinopathy.

Methods:

In this stratified, block randomised, double-blind, placebo-controlled trial at single center 54 patients aged 18-70 years were randomised in two treatment groups. Next to an eccentric training program the patients received a blinded injection containing either platelet-rich plasma (PRP group) or saline (placebo group). Primary outcome, the objective and validated Victorian Institute of Sports Assessment-Achilles (VISA-A) score, was assessed and ultrasound examination was performed at baseline and all follow-up appointments.

Results:

After randomisation into the PRP group (n=27) and the placebo group (n=27) there was a complete follow-up. After one year, the mean VISA-A score improved in both the PRP-group and the placebo group. There was no significant difference in increase between both groups (adjusted between-group difference, 5.5; 95% CI, -4.9 to 15.8, p=0.292). Ultrasonographic tendon structure improved significantly in both groups, but not significant different between both groups (adjusted between-group difference, 1.2 %, 95% CI, -4.1 to 6.6, p=0.647)

Conclusion:

One-year follow-up analysis of the world’s first randomised controlled trial showed no evidence for the use of platelet-rich plasma injection in chronic Achilles tendinopathy. These findings are in line with our 6 months results [De Vos et al. JAMA 2010].

Keywords:
Achilles Tendinopathy, Platelet-Rich Plasma
The role of patella enthesophyte in jumper’s knee. Ultrasound findings in 18 athletes’ knees.

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Introduction:
Patellar tendinopathy (jumper’s knee) is a common injury in those sports causing high-torque forces on the patella. Several investigations have tried to elucidate its etiology, being structural changes in the tendon insertion at the inferior patellar pole the most studied finding. Although the overload at the pole seems to be the cause of the formation of the enthesophyte, its role in jumper’s knee remains unclear.

Methods:
Study design: Retrospective cohort study with two groups:
- Jumper’s knee group (JKG): 12 elite athletes (18 pathologic knees, mean age 29,6±7,09) from different sport specialities, with a clinical diagnosis of patellar tendinopathy from 2007 to 2010.
- Control group (CG): 18 elite athletes (mean age 28,1±5,4) without any previous clinical history of patellar tendon injury.
Anthropometrical measurements, evolution time of symptoms, and grade of tendinopathy (Blazina scale 1-4) were determined, and by means of color Doppler ultrasound examination (Voluson 730 General Electric SP6-12. Multi-frequency linear transducer) structural changes and neovascularization (Hoksrud criteria) were classified, and tendon thickness (6mm from the apex) and enthesophyte length (if present) were measured.

Results:
The average evolution time of symptoms was 22,9 months, and the average Blazina scale grade for JKG was 2,7±1. No statistically significative data were found between anthropometry and symptoms. Ultrasound examination revealed that the enthesophyte was present in 16 of 18 pathological tendons (JKG=89%, CG=27%), with a medium length of 6’1±3,8mm (CG=2,1±0,4mm). Neovascularization was present in 13 of 18 pathological tendons (JKG=72%, CG=5%), and the average tendon thickness was 69,8% higher in JKG than in CG (JK=8,68mm/CG=5,11mm). A direct relationship among enthesophyte length, tendon thickness and evolution time of symptoms was found.

Conclusions:
Presence and size of a distal enthesophyte in the inferior patellar pole influence the perpetuation of symptoms, and determine tendon degeneration and chronicity.

Keywords:
Ultrasonography, enthesophyte, inferior patellar pole.
Stresses and displacements for normal human knee menisci and for sectioned menisci using finite element method.

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Introduction:
The paper has the following objectives: The obtaining of virtual 3D parameterised models of the menisci; the determination of the stresses, deformations and displacements of menisci for different cases and for different mechanical solicitations, using finite element method.

Methods:
To obtain the bones cross sections we used a Aura Philips tomograph.
- The obtained images were re-drawn in AutoCad over the real tomographies and the drawings were imported in SolidWorks (a parametrical Computer Aided Design software), section by section, in parallel planes. The virtual models of the internal menisci and external menisci were obtained.
- The initial parameters and kinematical and kinetostatical functions of the virtual biomechanical system of the knee joint were established.
- This system was imported in VisualNastran software;
- The virtual models of the internal menisci, external menisci were discretised and analysed using the finite element method.

Results:
We obtained the finite elements structure of both human knee menisci. Maps for the von Misses stresses, for the displacements, for the deformations and for the deformation energy in normal menisci. In the cases of 1/3 from the volume of the medial menisci is cut and 1/3 from the volume of the lateral menisci is cut, we simulated a virtual meniscectomy. The stresses and the displacements diagrams were also obtained.

Conclusions:
1. For an indemn anatomical knee, the stress in menisci is un-uniform distributed, the zone of menisci body being the most loaded in both cases: extension and flexion.
2. The deformations in menisci are unequal distributed, the maximum being obtained at the level of the menisci body.
3. In the knee extension, the deformations are almost twice bigger than the deformations in the case of knee flexion.
4. The increasing twice of the loading force in the knee joint determines an increasing of stresses with only 20 percents because of the amortiser role of the menisci.

Keywords: Virtual menisci, simulation, finite element method
Acknowledgements: This research work was supported by CNCSIS-UEFISCSU, grant 86/2007, Idei_92
Platelet-rich plasma (PRP) and tendon healing: Animal model.

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Introduction:
The tendon is a tissue which does not heal easily. Recently, several studies have demonstrated the positive effects of platelets on the healing process of tendons. A local injection of platelet–rich plasma (PRP), which releases in situ many growth factors, has the potentiality to enhance the tendon healing process. The aim of our experiment was to ascertain by an original mechanical measure whether the use of PRP was of interest for accelerating the healing process of rats’ Achilles tendons after surgical induced lesion.

Methods:
A 5mm defect was surgically induced in 90 rats’ Achilles tendon. Rats were divided into 2 groups of 45: (A) control (no treatment) and (B) PRP treatment. Rats of group B received a PRP injection in situ after the surgery. Afterwards, rats of both groups were placed in their cages without immobilization. After 5, 15 and 30 days, 10 traumatized Achilles tendons of each group were dissected and removed. Immediately after sampling, tendons were submitted to a biomechanical tensile test up to rupture, using a “Cryo-jaw”. After that, transcriptomic analyses were made on the tendon samples, to study the expression of type III collagen, matrix metalloproteases and tenomodulin. A hydroxyproline dosage was done to quantify the collagen in the tendon during its healing process. Tendons of the 15 remaining rats of each group were subjected to a histological study, respectively at day 5, 15 and 30 (5 rats for each time).

Results:
We demonstrated that the force necessary to induce tendon rupture during biomechanical tensile test study was greater for tendons which had been submitted to an injection of PRP compared to the control group: +19% (day 5), +30% (day 15) and +43% (day 30). Histological study showed that PRP could enhance cells proliferation, angiogenesis and collagen organisation. Our biochemical analyses did not explain beneficial effects of PRP. Indeed, there was no significant difference neither between the expression of different studied genes, nor in the quantity of hydroxyproline between both groups.

Conclusion:
This experimentation has shown that a PRP injection could accelerate the tendons healing process and improve its quality.

Keywords:
Platelet-rich plasma, tendon, healing
Nutrition intakes and practices of marathon swimmers.

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Introduction:
The purpose of this study was to assess nutritional status of swimmers, during the marathon swimming event of crossing Toroneos (26 km). The participants were 24 athletes mean aged 36.08±12.52 years. The sample was divided into two groups, according to their age: a) 18-34 years (12 athletes) and b) 35-68 years (12 athletes).

Methods:
The athletes recorded their food intake for 3 training days and during the race. Food intake was analysed in nutrients using the Food Processor nutrition program (version 7.4, 1997, ESHA Research Salem, Oregon). For the statistical analysis, SPSS (v.15) was used.

Results:
The athletes had inadequate intake of energy during the training period. There were no differences in energy intake, according to age (2144±190kcal for the athletes aged 18-24 years and 2181±198kcal for the athletes aged 35-68 years). Both groups had inadequate intake of carbohydrates (4.6±0.96 g/Kg Body Weight or 67.55±10.74% of Energy Intake, for the younger athletes and 4.0±1.21 g/Kg BW or 68.44±9.16% of EI for the older athletes). Protein intake was 0.95±0.20 g/Kg BW or 14.30±4.46% of EI, and 0.93±0.31 g/Kg BW or 15.71±3.81% of EI for the younger and the older athletes, respectively. Fat intake was above the recommended values for both age groups (18-34 years: 32.70±2.60% of EI, 35-68 years: 35.13±3.10% of EI). Both groups met the recommended daily allowances (RDA) for all micronutrients, with the exception of B3, Zn and Mn.

During the race, the athletes consumed 12 types of solid food and 7 types of fluids. The preferred foods were: bananas, energy gel and honey. From liquid beverages the preferred ones were: isotonic drinks, water and soft type cola. Energy intake during the race was 1048±447Kcal for the younger group and 948±504Kcal for the older group. There was no difference between the two groups in energy intake. Younger athletes maintain a stable body weight, while older ones lost 1.62±1.89Kg, during the race.

Conclusion:
The athletes had insufficient energy and carbohydrate intake, factors that can influence their athletic performance. There was no significant difference between the two groups in energy and macronutrient intake. However, the older athletes had higher demands during the race in energy and nutrients, due to their higher energy expenditure, as the duration of the race was longer for them and lead to a loss of body weight.

Keywords:
Marathon-swimmer, nutrition practice, diet
Pitch side combined assessment for suspected ankle fractures.

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Objective:
To assess the sensitivity of two musculoskeletal tests as primary examination for on site use.

Methods:
I searched through electronic search engines for articles ranging from 2000-2010. I used the keywords: ankle injuries, ankle examination, ankle assessment and tuning fork.

Data synthesis:
Ankle injuries are a common injury in sport accounting for 15-45% of all sport injuries. Eighty five percent of all ankle injuries concern the lateral ankle complex. However differential diagnosis suggests the examination of fractures such as at the malleolus, fifth metatarsal, navicular, anterior calcaneus process and at the midtarsal bones. During sport events in the misfortune incidence of an ankle injury physicians are required to assess their athletes. However according to each games rules and situation they are required to assess in shortest time possible.

Ottawa ankle rules (OAR) have been suggested to have a high sensitivity to detect to assess fractures (Northrup et al 2005; Papacostas et al 2001). Papacostas et al (2001) examined 122 patients and found 100% sensitivity for maleolar and midfoot fractures when applied the OAR. Leddy et al (2002) found 100% sensitivity in 217 patients applying the OAR-Buffalo modification. Moore (2009) found high sensitivity (n = 10) using a tuning fork for the detection of transverse fractures. Further is suggested that the use of a tuning fork is an fast and reliable method to assess possible fractures (Moore 2009).

Conclusion:
We believe that the combination of those two tools can provide a clear and fast initial evaluation during an event. Nevertheless in a clinical or on site setting can further increase reliability for assessing fractures where X-ray is not available. However, further investigation is required regarding the reliability of the tuning fork in assessing fractures, reliability of the examiner and time required to complete the progressive examination.
Validation of a non radiographic ankle arthrometer.

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Introduction:
Commonly used stress tests require radiography. The respective reliability and sensitivity is still under debate. We developed a non radiographic ankle arthrometer to objectively assess mechanical ankle stability. The aim of the present study was to validate the ankle arthrometer in a cadaver and in vivo set up.

Methods:

Cadaver study
Nine cadaver specimens were tested under different anterior drawer load and ankle angle positions against standardised radiography. Lateral ankle ligaments were sequentially cut during testing procedure. Stiffness was calculated and the diagnostic validity of the ankle arthrometer was analysed.

In vivo study
23 subjects participated in the study. An orthopedic surgeon first performed a manual anterior talar drawer test to classify the subjects’ ankles as stable or unstable. Subjects then underwent ankle arthrometer testing up to 200 N anterior drawer load twice and the stiffness were calculated.

Results:

Cadaver study
Stable and unstable ankles were significantly differentiated by stiffness analyses (p= 0.01) with the ankle arthrometer adjusted to 0 degrees of plantarflextion and 50 N anterior drawer load application.

Results from the ankle arthrometer radiographs and the standardized stress testing device correlated significantly (rho = 0.73-0.94; p = 0.00 to 0.03). Stiffness analyses discriminate stable and unstable ankles with a sensitivity of 91.7% and specificity of 62.5%.

In vivo study
Using the manual anterior drawer test, 16 ankles were classified as stable and 7 as unstable. Stiffness group analysis differentiated stable from unstable ankles significantly (p= 0.00 and p= 0.01). Test-retest demonstrated an accurate reliability (ICC = 0.80).

Conclusions:
Validation and reliability of the non radiographic ankle arthrometer was demonstrated in a cadaver and in vivo set up. The ankle arthrometer stiffness analyses may be relevant to screen athletes at risk for lateral ankle instability, for follow up studies, and to implement preventive strategies.

Keywords:
Ankle, testing, prevention
Epidemiological study of injuries in Greek Taekwondo athletes.

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Introduction:
Taekwondo constitutes one of the most ancient Korean self-defensive martial art. The nature of Taekwondo is such that requires eruptive, fast and strong kicks. The first official participation of the sport in the Olympic program took place in 2000, with the city of Sydney in Australia as the host of the Olympic Games. Particular interest concerning the study of injuries in martial arts has aroused the last decades (Kazemi et al., 2005). Nevertheless, only a small number of studies regarding injury epidemiology in martial arts can be found in international literature (Pieter and Zemper, 1997).

Aim:
The present research study is aiming to investigate the nature and the frequency of injuries in Greek Taekwondo athletes, either in training or playing field, as well as an overall assessment of characteristics upon training procedures.

Methodology:
The research sample constituted of 150 Taekwondo Greek athletes, men and women, concerning those who had experienced various kinds of injuries during training or competition games or both. Athletes of the Greek National Team participated also in the present study. Athletes who had never experienced injury incidents and were under 14 years of age were excluded from the research.

The means of record was an extemporary questionnaire, which resulted after thorough investigation of the international literature. The questionnaire constituted of five pages and contained overall 28 short questions. The final form of the questionnaire was concluded after performing a precedent pilot study in a sample of fifteen athletes. For the statistical data process of the results, the statistic package of SPSS 13 for Windows was used.

Results:
The area in which the majority of injuries occurs in Taekwondo seems to be the head and the lower limbs, while injuries are mostly related with muscles and tendons, ankle sprains, bruises, fractures, as well as incidents of brain concussion resulting after kicks in the head.

According to findings of this research study, the regular usage of protective equipment, the use of bandage around the ankle during training and stretching exercises on regular basis in training, can be proved effective in order to reduce the possibility of an injury during training (p <0.01). Moreover, the interference of physiotherapy can reduce the post-occurrence of disturbances in training conditions, due to the elapsed injury (p< 0.05).

Conclusions:
Discussion: Because of the fact that Taekwondo is enlisted in contact-type sports, injury occurrence tends to be more frequent in contrast with other sports, in which physical contact between opponents is more rare. The knowledge of the reasons that cause those kind of injuries (deriving from physical contact) is of significant importance, not only for the athlete but also for the trainer of Taekwondo, so as to meet the appropriate precautions to prevent injuries. Therefore, trainers of Taekwondo should take into account all the required precautions during training, such as stretching exercises after warm-up, regular use of protective equipment, as well as use of bandage in the ankle, especially for the athletes with sprain history.

References:
Patient pain drawing in diagnosing the cause of exercise-induced leg pain.

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Introduction:
Classifying symptoms by patient pain drawing (PPD) may be helpful in diagnosing chronic anterior compartment syndrome (CACS). We have investigated the sensitivity and interobserver reliability of the PPD to diagnose CACS among patients with exercise-induced leg pain (EILP).

Methods:
This study included 88 consecutive patients (48 men, 40 women; mean age 33, range 13-66, years). Two observers independently diagnosed the causes of leg pain based solely on PPD. The causes of leg pain in patients were diagnosed into seven categories (CACS, chronic lateral compartment syndrome, chronic posterior compartment syndrome, medial tibial syndrome, peroneal tunnel syndrome, muscle rupture and miscellaneous). The true diagnosis was based on a complete clinical examination including laboratory measurements of intramuscular pressure and intramuscular oxygenation by near-infrared spectroscopy during and after an exercise test that elicited the symptoms.

Results:
The sensitivity of PPD to diagnose CACS was 69%. The positive predictive value was 53%. The interobserver reliability based solely on PPD in diagnosis of CACS was 92% (kappa = 0.81). Based on PPD, the causes of EILP were correctly diagnosed into the 7 categories in 69% of all cases. The interobserver reliability in diagnosis of EILP reached 88%. Multiple pain locations on PPD were observed in 4% of patients with CACS and 24% of patients without CACS. No patient had chronic compartment syndrome in the lateral or posterior compartments.

Conclusions:
This study indicates that PPD is a reliable tool to make accurate predictions in diagnosing CACS and other causes of EILP. Patients with CACS reported significantly less co-morbidity compared to patients with other causes of EILP. PPD should be combined with patient's history, clinical findings during an exercise test that elicits the symptoms and signs, as well as with the results from laboratory tests.

Keywords:
Chronic anterior compartment syndrome, exercise-induced leg pain, patient pain drawing
Effect of trampoline-based intervention program in static balance of children with developmental coordination disorder.

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Published studies have shown that the presence of Developmental Coordination Disorder (DCD) (APA,1994), involves about 5-15% of the population. This work focused on the study of the effect of an intervention program with trampoline on school children of ages from 6 to 11 years old, exhibiting DCD. The study included DCD detection with the quantitative diagnosis test of Neuromuscular Coordination of the entire body (Körperkoordinationstest für Kinder KTK, Kiphard & Schilling, 2002, 1974), leading to 20 (out of a total of 200) children exhibiting DCD (intervention and control groups). Furthermore, a group of 10 students constituted a control group without DCD. A static balance measurement test was applied, using the balance platform (footchecker 3.2, Lovan Engineering S.r.l., Bologna, Italy) for all 30 students as follows: standing with open and closed eyes, and balance maintenance while standing on each one foot for 30”. An intervention program for multifaceted practicing of coordination abilities with trampoline was also applied to the intervention group, whereas the control groups followed the typical Physical Education timetable. An important effect of the intervention group (p<0.001), regarding the standard deviation of the Centre of Pressure (C.P.) in the anteroposterior axis (Y), was observed during measurement with open eyes and standing on the right foot, as well as in the collateral axis (X), while standing on the left foot. A statistically significant difference (p<0.001) was also exhibited in the Y-axis, concerning the shifting of the C.P., for the case of measurement with open eyes and standing on each foot. Regarding the within groups interaction, a significant effect (p<0.05) was observed for the shifting of the C.P. along the Y-axis for all conditions of measurement. These results support the hypothesis that the use of trampoline may improve the Neuromuscular coordination, hence could provide a valid diagnostic tool for DCD.

Keywords:
Developmental Coordination Disorder, Trampoline, Balance Platform
The important role of the arthroscopic hip surgery in the athletes with hip injuries. Our experience. A retrospective study.

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Hip arthroscopy has gradually evolved over the past two decades. Recently hip arthroscopy has increased its role in diagnosis and treatment for specific intraarticular and extraarticular hip injuries and especially for soft tissue injuries.

Material and Methods:
February 2004 – March 2010, 48 athletes, football players, basketball players, weight lifters, gymnasts, 3 water polo players. Mean age: 32 years. (19-39 y.o.)

Instrumentation and Equipment:
70°, 4,5mm arthroscope , High flow rate mechanical pump, 15 gauge 6” cardiac needle, Convex full radius chondroplasty blades, Special electrocautery. Distraction apparatus, DVD unit, Mechanical water pump unit, Image intensifier

Indications:
Undiagnosed hip pain, early osteoarthritic signs, Labral pathology, Loose bodies, Osteochondral defects, Sepsis, Ligamentum teres, Trauma, Synovitis, Femoral acetabular impingement, “Frozen hip”, chondrocalcinosis.

Symptoms:
Deep dull ache pain during hip flexion and external or internal rotation, Decrease R.O.M., Decreased Hip flexion.

Clinical findings:
30/48 Cam sign : positive, 12/48 Pincher sign :positive, Impingement syndrome in hip flexion and internal and rotation and occasionally in external rotation, snapping hip, iliopsoas tendinitis.

Surgery:
Standard orthopaedic traction table, Supine position, Hip is extended and abducted 25°
Portals: Anterolateral, Posterolateral, Modified Anterolateral

Intraoperative findings:
Detachment of the labrum, 10/48 erosion of the articular cartilage of the acetabulum and drilling of the bare area, 30/48 Cam sign excision, 12/48 pincer sign excision, 8/48 superior medial and superior lateral labrum repair with anchors. (Intraarticularly)

Results:
The modified Harris Hip Score was used for their classification of their symptoms. 2 of the athletes had a residual pain due to an iliopsoas tendinitis. 45/48 had relief from their arm symptoms, 1/48 will need to be reoperated shortly (after he developed FAI), 2/48 are treated for the iliopsoas tendinitis.

Conclusion:
The athletes with symptoms of an internal hip pain and femoral acetabular impingement signs after a detailed clinical exam of their hip and after failure of their conservative treatment, will certainly get a benefit from an arthroscopic procedure (which is technically demanding).
Overview of Exercise Induced Lower Leg Pain.

Mr M Allen.

This paper discusses the common causes of exercise induced lower leg pain, including Chronic Compartment Syndrome (CCS), Medial Tibial Stress Syndrome (MTSS) and Chronic Calf Tears (CCT).

The pathogenesis, clinical presentation, diagnosis and treatment of the more popular conditions are discussed.

Chronic Compartment Syndromes are due to an increased pressure in one or more of the four compartments of the lower leg, brought on by exercise and relieved by rest. Clinical examination of the limb is normal. Diagnosis is made by measuring the compartment pressures during exercise. Treatment is by a subcutaneous fasciotomy of the affected compartments.

Medial Tibial Stress Syndrome is thought to be due to abnormal biomechanics leading to a periostalgia of the inner tibial border both during and after exercise, with symptoms lasting up to 24-48hrs post exercise. Patients always locate their pain to the inner tibial border. Examination of the limb shows the lower and often the middle inner tibial border to be tender. Diagnosis is largely clinical but may be helped by MRI Scans. Treatment is initially by physiotherapy in the form of flexibility and strengthening exercises and the fitting of orthotics. If this fails then major surgery is the only other alternative.

Chronic Calf Tears occur as a result of scar tissue in the muscle or adhesions developing between the fascia and the muscle causing pain in the posterior aspect of the calf. Often there is a past history of an acute calf tear. The pain presents during a run and often the athlete will describe pain in the posterior aspect of the calf which will increase with the intensity of exercise and if they try to run through the pain they experience a tearing sensation in the calf muscle sufficient to stop them exercising and cause them to limp up to a period of three days. Clinical examination often reveals tenderness over the medial head of gastrocnemius. An MRI Scan may or may not aide in the diagnosis. Treatment initially is in the form of physiotherapy and if this fails then operative surgery which carries an 80% success rate.

Finally other rarer causes of exercise induced leg pain are discussed, namely muscle hernia, popliteal artery entrapment syndrome, nerve entrapments and metabolic disorders.

Medial Tibial Stress Syndrome.

Prof Mark E Batt.

Medial tibial stress syndrome (MTSS) is an enigmatic condition with confusing terminology, the term often being used interchangeably with shin splints. It is suggested that MTSS and shin splints be used as generic rather than diagnostic terms. On account of variable definitions, the reported incidence rate varies from 4-35% in military and athletic populations. Broadly, it represents exertional lower leg pain centred on the posteromedial tibial border and being diffuse/linear (greater than 5 cm) rather than focal. Presentations of acute shin splints should be regarded as bone stress injuries until proven otherwise and not treated as periostitis with anti-inflammatory modalities/drugs. Chronic presentations are more likely in females, those with a running history less than five years, increased BMI, larger calf girth, increased hip rotation, standing foot pronation, and a previous history of orthotics use, MTSS or stress fracture. Muscle hernia, stress fracture and chronic exertional compartment syndrome should be ruled out. The differential diagnosis also includes radiculopathy, nerve entrapment syndromes and the possibility of an accessory muscle should not be overlooked. There are few RCTs that have studied treatment and prevention and those available suggest that rest is probably as beneficial as any other form of intervention. Prevention may be afforded by either shock absorbing insoles or more formal orthotics. The pathophysiology would seem to be related to diffuse bone stress with resultant periostalgia. Thus rest and the possible use of compressive splints are advised with a graduated return to running activities once risk factors have been addressed.
Can we predict a bone stress injury?

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Stress fractures are often difficult to early differentiate from other soft tissue injuries. On the other hand to confirm early the diagnosis of a stress fracture an MRI is needed. Since 1972 the literature indicates that the detection of stress fracture by ultrasound was possible before x-ray findings. Stress fracture’s detection by ultrasound will be described and analyzed.

During the period 1995 – 2009, we evaluate with a physio ultrasound 115 track & field athletes. Firstly, we marked on patient’s skin the area to be examined both on the injured leg and on the healthy one. The patients were asked to report immediately any painful sensation. We used an ultrasound probe of 1MHz, with a diameter of 3cm and maximum intensity of 2.00W/cm². We scanned the questioned area in order to spot the point of major symptoms for 30”. In case of negative findings after a total time of 60” the procedure was completed. If there was a positive finding of intense pain, we reduced the power density and we continued for another 30”. We continued in the same pattern until the patient reported no discomfort.

The estimated sensitivity and specificity of this procedure was 94, 39% and 62, 5% respectively.

The mechanical energy when radiated from a source is mainly converted to heat. According to the literature, this ultrasound procedure highly elevates the temperature in periosteum. This increase of temperature is related to high transmission velocity and high absorption factor of the ultrasound.

The interpretation of the patients’ sensation is the key to diagnosis. Sensation of heat, either light heat or burning, vibration, or a pinching ache, did not indicate a positive result of the ultrasound test in contrast to intense pain or pressure. It was the latter that led us to imply the existence of stress fracture.

The ultrasound technique for stress fracture detection is a safe, non invasive, low cost method easily performed and could be a valuable tool for the physician’s regarding decision making in terms of an early diagnosis.

**Keywords:**

Ultrasound, stress fractures
Endoscopic release of fascia in CECS.

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Introduction:
Endoscopic treatment of intractable CECS of the lower leg in athletes is reported rarely and anecdotally.

Methods:
We developed a minimally invasive, endoscopically assisted technique for release of CECS of the lower leg. Follow-up was performed by telephone interview 47 months (range 5 months–7 years) after surgery.

Results:
38 compartments were released in 17 athletes (19 deep posterior, 16 anterior, and 3 lateral compartments). All these patients were available for follow-up analyses. No complications were seen following anterior and lateral compartment decompression. Contrasting to this, two patients operated under tourniquet for deep posterior compartment syndrome suffered intraoperative hemorrhage and open revision surgery was required. No complications due to vascular injuries were seen in all further patients when the tourniquet was omitted. Ten patients returned to previous sport activity. At follow-up, results were good or excellent in 10 out of 17 patients. Visual analogue pain scale improved from 7.4 (range 5 to 9) before surgery to 2.4 (range 1 to 8) at follow up (p = 0.0005).

Discussion:
Our data indicates that endoscopic release for CECS of the lower leg is feasible and successful. The procedure is at risk for vascular complications during deep posterior compartment fasciotomy. Consequently, it is emphasized to perform the procedure without tourniquet.
How to rehabilitate an athlete with low back pain.

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Low back pain is one of the most common causes of lost playing time in athletes. The best rehabilitation in low back pain can be considered the early prevention. In the case of injury it is important to know and to understand the phases of rehabilitation and needed. At the level of low back during its motions is important to know the kinetic and kinematics aspects. The kinematics of spinal flexion and extension are associated with a shifting instantaneous axis of rotation. Spinal kinetics at athletes includes intrinsic and extrinsic forces that can affect the spine. The sources of low back pain include the intervertebral disc, nerve roots, sacroiliac joints, ligamentous, muscular tissue. Assessment begins with history of pain and relation with sport activity, location of the pain in relation with body position, walking, effort, daily moment and also progressivity. In assessment we include clinical examination of the entire kinetic chain of the spine, by assess the posture, mobility and also using some specific tests like: Gielett, Faber, Thomas, Gaenslen complet by imaging evaluation (MRI, plain radiographs, bone scan, CT scan). Most common causes of low back pain to athletes are: fractures, acute disc herniations, muscular contusions and strain or degenerative disc diseases, spondylolysis, spondilolisthesis, facet syndrome, lordotic posture, sacroiliac inflammation).

Rehabilitation depends of how we understanding the involved sports and according to the injury. Are three phases: acute and subacute, rehabilitative phase and sport specific rehabilitation. Medication includes NSAIDS and also brace, manipulation.

Acute and subacute phase: propose few days of rest, icing, ultrasounds, iontophoresis, lasertherapy and brace. In subacute phase is possible aerobic activity in the pool. For entire period we recommend isometric contraction for abdominal and extensors muscle.

Rehabilitative phase: in this phase we prefer core stabilization and depend of pathology mechanism, we shall promote flexion or extension program, for obtain neutral zone that involves comfortable spinal motion. We begin the closed chain strengthening and co-activated muscular coordination for improvement muscle balance. In second part of rehabilitation phase, the program depends of sport activity, because the core have to transfer the forces from lowers limbs to uppers limbs or to generate forces and recoil forces. For this the athletes must to make these motions.

Sport specific rehabilitation is the third phase and prepare the returning to sport activity. So, are specific programs for dancers, gymnasts, golf and racquet sports, football, throwing, weightlifters. The programs must to involve decrease of stress forces at the back, to mantain the static of spine and decrease the disc injuries. All of these programs have to be included in the training programs for minimizing recurrence and improve sport performance.
Back and leg pain and directional preference exercises.

Stephen May, PhD.
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Directional preference exercises are determined during the physical examination of patients with back pain and referred pain from the spine with the use of repeated movements by the patient. There maybe clues to this found during the history taking, such as the patient indicates they are better when walking and worse when sitting – this could be a clue to a favourable response to extension activity and negative response to flexion activity. This would be explored in the physical examination by testing out the response to repeated extension exercises. If the patient reported centralisation of pain, which is the abolition of distal symptoms, or a decrease in symptom intensity or abolition of symptoms in response to the repeated movement they would be deemed to have a directional preference for extension exercises. These would be prescribed for the patient self-management exercises. There is considerable evidence supporting the favourable long-term prognosis associated with centralisation. Furthermore there is evidence to support the use of directional preference exercises in favour of non-specific exercises. This presentation will examine the evidence for directional preference in general, but also specifically as it relates to patients who present with back pain and referred symptoms. The evidence provided will demonstrate the value of directional preference exercises for this group of patients in the athletic and non-athletic populations.

The clinic embraces all aspects of SEM from 'exercise on prescription' and 'functional rehab programmes' to specialist image guided spinal injections.

Simon is a Musculoskeletal and Sports physician and Director of the Blackberry Clinic in Milton Keynes.

Simon has a special interest in Prolotherapy injections as an adjunct to intense rehab programmes for unremitting low back pain. This has culminated in successful treatment of many elite athletes and footballers.

Most clinical trials on the treatment have shown significant benefits but no prominent trials have used patients with specific back pain diagnoses using selective block injections to determine which patients are most likely to benefit.

Rowing has a LBP incidence of 100% and over 20 GB rowers have been successfully treated using this technique.

The lecture will summarise his experience in the use of prolotherapy in these athlete
The effect of ankle and knee bracing on joint stability and performance during different tasks.

Jim Richards

Braces are commonly used for prevention and treatment of ankle and knee injuries by individuals who take part in sporting activities which involve challenges to the stability of joints. However the use of ankle and knee bracing is less common in the conservative management of joint pain and pathology which is not sporting related. In all cases the braces are attempting to provide improved stability of the joints in the coronal and transverse plane, but there has been much debate on whether bracing offers a functional or proprioceptive effect.

Much of the biomechanical testing to date has been conducted using very simple biomechanical models, which allow do not allow accurate measures of the movement and moments about the foot, ankle and knee joints in the coronal and transverse planes. From this it is safe to say that the effect of ankle and knee bracing on the coronal and transverse plane mechanics of the lower limb have not received any adequate attention in the research literature, although clinically these are the very things that such devices often claim to support and control. The importance of coronal and torsional movement and moments of the foot, ankle and knee joints has previously been identified. However little or no work has been published to see how the torsional and coronal mechanics of the ankle and knee joints are changed during functional tasks using devices designed to control and give stability to these joints.

This workshop will consider the action of several methods of orthotic management of the ankle and knee joints on a variety of conditions by considering the research evidence. In each case advanced methods of analysis have been used to determine the biomechanical changes and how these can be related to the clinical benefits. This will highlight not just the effects about the foot and ankle but also the effects of treating the foot and ankle on the knee, hip and pelvis. The data on a variety of methods of bracing for patellofemoral pain and ankle stability will be considered, with particular attention on the nature of the functional and proprioceptive effects of each method.
Mechanotransduction; how exercise heals at the tissue level.


**Purpose:**
This keynote presentation aims to empower clinicians to prescribe exercise confidently for a variety of musculoskeletal conditions. Specifically, interested attendees will (i) be able to explain the process of mechanotransduction because it is a key to enabling patients to adopt exercise as treatment, (ii) embrace the term 'mechanotherapy' as either a useful term to share with patients, (iii) confidently prescribe exercise to stimulate tissue repair.

**Background:**
Mechanotransduction is the physiologic process where cells sense and respond to mechanical loads. I argue that clinicians should reclaim the term “mechanotherapy” – the use of therapeutic tissue loading to stimulate repair and remodeling in tendon, muscle, cartilage and bone. Thus, the talk has broad relevance to various conditions. In short, mechanotransduction is the process whereby the body converts mechanical loading into cellular responses which, in turn, promote structural change. I have summarized my thoughts in the following paper. ¹
Types of Hamstring Injuries in Sports.

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Occurrence:
Hamstring strain is the most common single injury in elite soccer (Ekstrand et al. 2009). To prevent these injuries and to optimize the rehabilitation it is important to analyze in what situations they occur. There are at least two distinctly different types of acute hamstring strains, one occurring during high-speed running and mainly involving the biceps femoris long head, the other during movements leading to extensive lengthening of the hamstrings (such as; high kicking, sliding tackle, sagittal split) often involving the free proximal tendon of semimembranosus (Askling et al. 2008). These two injury types will be exemplified with injury situations, MRI-findings and time back to sport from our ongoing study on acute hamstring strains. When the free proximal tendon is involved, there seems to be an extended period of time before full function without symptoms is reached. Injury type, palpation of maximal pain and MRI-findings (tissues involved) can give important information about prognosis.

Prevention:
It seems to be very important to specifically restore the eccentric hamstring muscle strength after injury before returning to sport to prevent the common hamstring re-injury (Croisier et al. 2002). Also in the few prospective studies that exist, eccentric training appears to be an essential ingredient. This has been indicated in two rather recent Scandinavian studies, one prospective randomised study on Swedish elite male football players (Askling et al. 2003) and the other on Icelandic and Norwegian male elite football players (Árnasson et al. 2008). However, both studies suffer from methodological shortcomings, which limit their impact.

Rehabilitation:
There are no studies describing what kind of rehabilitation program athletes suffering different types of hamstring strains should perform. One study (Sherry et al. 2004) indicated that core stability training is an important part of the rehabilitation program. In our ongoing study we randomized the injured athletes into two different programs. Different exercises with the aim of putting high eccentric demand on the hamstrings in situations with different degrees of lengthening of the hamstring muscle-tendon complex.

Testing:
There is no consensus about a single test, clinical examination or imaging investigation that would provide strict criteria for safe return to sport following hamstring muscle strain. We are currently evaluating a new active hamstring flexibility test that appears to add discriminative power and provide useful additional information to the common clinical examination before going back to full training/match. Preliminary data will be presented and discussed.
Achilles tendon overuse injuries - Risk factors and biomechanics.

Wilfried Alt, Claudia Reule and Harald Hochwald.
University of Stuttgart, Germany

Introduction:
Many studies have been published concerning overuse and acute injuries of the lower extremity with respect to individual risk factors [1]. Based on the studies by Isman [2] and others it has been speculated that inclination and deviation of subtalar joint axes (STA) could be used to estimate the risk to chronic or acute injury. In this novel approach a method has been used to determine a set of parameters, describing the axes of rear foot movement with respect to the tibia. The aim of the study was to measure STA of runners with and without chronic symptoms of Achilles tendon (AT).

Methods:
The zebris® motion analysis system has been adapted for subtalar joint axes estimations. By postulating a pure rotational movement around the STA the system could be reduced to only one ultrasound marker which was fixed rigid to the rear foot complex by a special mounting device. The ankle has been moved to maximum dorsiflexion. Then rearfoot has been moved from inversion to eversion 6 times. A set of 6 finite axes between the end positions was calculated in real time and then averaged in order to minimize errors from data capturing. A total of 614 axes were calculated from 307 high level runners.

Results and Discussion:
Data of this study revealed an average inclination of 42° and an average deviation of 11° from 614 ankles. Significant differences have been found between deviation angles from ankles with Achilles tendon problems (18° ± 23°) compared to those without AT problems (10° ± 23°). Compared to data of Isman et al. [2] (23° ± 11°) it seems that the average deviation of the STA is smaller and therefore more parallel to the longitudinal axis of the foot, which is also in line with the findings of Lewis [3] (18° ± 10°). It has been speculated that AT problems might be related to asymmetrical loading during running and this is supported by the findings of this study. However, the range of data and standard deviations are actually higher than published in previous studies. Further investigations are necessary to shed light on anatomical factors and other reasons for Achilles tendon problems in runners.

Conclusions:
This method can be used to estimate a functional joint axis which is closely related to STA orientation. This might be useful, especially to investigate large sample sizes in order to detect individual risk factors to chronic AT overuse in running.

References:
Hamstring Injuries.

N.G.Malliaropoulos MD, Msc & Dipl in SEM, PhD, FFSEM (UK).

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Muscle injuries are among the most common, most misunderstood, and inadequately treated conditions in sports. According to some studies, muscle injuries account for 10 - 30% of all injuries in sport(1). Hamstring injuries are the commonest muscle injury in all Sports.

Hamstrings function is complex. Depending on leg positioning and relationship to the ground it can serve as a hip extensor, knee flexor, and external rotator of the hip and knee. Long head receives innervations via a tibia portion of the sciatic nerve, the short head receives innervations from the common personal nerve.

The mechanism of the injury is very important to know. Contraction injuries occurring during Running at Maximal or Near-Maximal Speed Primary involve biceps femoris, long head and they heal faster comparing to stretching injuries occurring in Dancing or kicking and primary involving Semimembranosus, proximal tendon (2).

Various systems have been used to classify the severity of the injury. They classify them in three grades, as mild, moderate, severe, according to imaging findings, time to walk pain-free(3). Our Clinical classification is based on estimating the knee active range of motion deficit between the injured and the healthy side(1). Ultrasound is used to image the muscle lesion(4).

Following this clinical classification we are able to decide for the treatment, to design the rehabilitation protocol to predict the time to full rehabilitation and to assess the reinjury rate.

We must always keep in mind to differentiate Common Signs and Symptoms of a Hamstring Strain Injury Compared to Those Referred to the Posterior Thigh from another Source(6).

Rehabilitation is one of the key points dealing with Hamstring injuries. We as clinicians have to prescribe the right clinical application correlated to each healing process phase Operative intervention is reserved only for severe injuries, such as complete rupture of the hamstrings muscles, either at the insertion or at the origin(avulsion).

The re-injury rate for hamstring injuries has been found to be 12–31%. Early return to sport & poor rehabilitation program met with a high risk of re-injury. According to our clinical classification Objective clinical findings can provide an effective clinical tool to assess the risk of re-injury following acute hamstring muscle strains in elite track and field athletes(5).

In terms of Prognosis the following factors have been shown to require a greater convalescent period: injury involving a proximal free tendon, proximity of the injury to the ischial tuberosity, increased length and cross-sectional area of injury.

Past history of hamstring injury is the main risk factor for the next injury(3). Being unable to walk at a normal pace pain-free within 24 h of injury was independent predictor of being unable to return to play in less than 4 weeks from the time of injury. Defining the severity of the injury enable us to assess the expected return to play timescale which is important in guiding rehabilitation and in team planning(5).

References:


5. Re-injury following acute posterior thigh muscle injuries in elite track and field athletes Nikolaos Malliaropoulos*MD, MS, PhD ,Tomide Isinkaye**BSc (Hons), Kostas Tsitas**MD, Agapi Papalada PT, Nicola Maffulli**MD, PhD, FRCS(Orth), Am J Sports Med. 2010, Under Publication ,Jun 3, PMID: 20522825

Achillies tendon pathology, present & future.

Professor N Maffulli.

Introduction:
The recent progress in molecular biology, could make possible to identify the factors which influence the metabolism of the tenocytes and promote their natural healing process. The role of growth factors in the healing of tendons, for example, is still unclear, although basic fibroblast growth factor can stimulate healing by promoting cell proliferation and synthesis of the matrix. Gene transfer for the targeted delivery of growth factors has been used successfully in animal studies. Excessive repetitive overload of tendons is regarded as the main pathological stimulus which leads to tendinopathy. The aetiology of this pathologic condition remains unclear. Tendinopathies have been linked to overuse, poor vascularity, lack of flexibility, genetic make-up, gender, endocrine or metabolic factors. Excessive loading of the tendon during vigorous physical training is regarded as the main pathological stimulus. The tendon may respond to repetitive overload beyond physiological threshold by either inflammation of its sheath or degeneration of its body, or by a combination of both. Damage to the tendon can occur even if it is stressed within its physiological limits since frequent cumulative microtrauma may not leave enough time for repair. Microtrauma can result from non-uniform stress within tendons producing abnormal concentrations of load within the tendon, frictional forces between the fibrils, and localised damage to fibres. Tendinopathy has been attributed to a variety of intrinsic and extrinsic factors. Vascularity, dysfunction of the gastrocnemius-soleus, age, gender, body-weight and height, are considered to be common intrinsic factors. Changes in training pattern, poor technique, previous injuries are common extrinsic factors which may predispose the athlete to tendinopathy. The etiology of pain in tendinopathies is still unclear. Management of tendinopathy can be conservative or surgical, but this is recommended after exhausting periods of conservative management, often lasting for at least six months. Conservative management is unsuccessful in 24% to 45.5% of patients with tendinopathy of Achilles tendon. Failure of conservative management after six months is an indication for surgery. Surgery may range from percutaneous longitudinal tenotomy to various open procedures. Long-standing tendinopathy, however is associated with poor results after operation, with a greater rate of reoperation before an acceptable outcome is obtained.

Exercise is Medicine – But what is the dose?

Professor K Khan.

The term ‘polypill’ was coined in a BMJ publication; researchers wondered whether a cocktail of 5 pills taken on a population basis could reduce cardiovascular disease by 80% (Wald, BMJ, 2003). Some would argue that there exists a polypill already – but the multi-system benefits of physical activity have been under-recognised. In this short presentation, I address the question ‘What is the optimum dose of physical activity for health?’

Key papers / recommend include:
Clinical Practice Guide for muscular injuries. Epidemiology, diagnosis, treatment and prevention.

Dr J Valle.

Muscular injuries are very frequent in sport. The epidemiological studies show that muscular injuries represent more than 30% of all injuries (1.8-2.2/1,000 hours of exposure), which means that a professional football team suffers an average of 12 muscular injuries per season, equivalent to more than 300 lost sporting days.

Despite their high frequency and the interest in finding solutions, there is little scientific evidence on aspects as important as prevention and treatment, we will outline some weak points. Diagnosis of muscular injuries is based on clinical medicine, fundamentally on symptomatology and especially on the anamnesis of the injury mechanism and physical examination. Imaging studies through the musculoskeletal echography and magnetic resonance are complementary studies, despite the fact that they could be increasingly more useful when confirming a diagnosis or especially when giving a prognosis. There is no sufficiently specific biochemical marker available that could help with the diagnosis of the seriousness and the definitive prognosis of each of the different muscular injuries.

Treatment guidelines for muscular injuries do not follow a unique model, despite the fact that the different alternatives have been modified very little. Finally, new expectations have been raised thanks to research within the field of biological repair and regeneration.

Prevention programmes can reduce the incidence of suffering muscular injuries, but scientific evidence is still limited and it has only been possible to verify them in certain groups of sportsmen.

The objective of this talk is to show the diagnostic, therapeutic and preventative approaches that should be taken when faced with the various muscular injuries suffered by the football players of Barcelona FC. The protocols are based on current knowledge from recent years in the daily work of dealing with these types of injuries.

ESWT In The Management of Patella Tendinopathy.

Dr Stephen Motto.

London Bridge Hospital, London, UK

Patella tendinopathy is still a potentially career ending injury if not accurately diagnosed and actively managed. Prevalence has been reported to be in the range of 7 - 40% in the athletic population. There are still concerns regarding the aetiology, although the mechanical strain theory is the most accepted - repeat heavy loading initiating pathological extracellular and cellular dysfunction with eventual collagen disruption and tendon degeneration.

Musculoskeletal Extracorporeal Shockwave Therapy (ESWT) involves the use of low, medium and high energy focussed or non-focussed (radial) sound waves that have been shown to have a therapeutic value for certain orthopaedic conditions. ESWT in Patella tendinopathy "seems to be a safe and promising treatment" was the conclusion reached by Leeuwen et al in a review of the literature which appeared in the BJSM last year (BJSM 2009 43 pp13-168).

The mechanism of action of shockwaves remains unknown. It has been postulated that shockwaves induce hyperstimulation analgesia by increasing the threshold of pain. It also seems to increase vascularity and leads to increases in cellular signaling. Focussed shockwave therapy has been used in my practice with good results in a number of mild to moderately severe cases.
Carbohydrate requirements of elite athletes.

Maria Hassapidou.
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It is well documented that exercise performance is greatly influenced by nutrition. The key factor in coping with the heavy demands of exercise faced by elite athletes seems to be carbohydrate intake. Carbohydrate recommendations range from 6 to 10 g/Kg of body weight depending on gender and physical fitness level of the individual, total training load, energy expenditure, type of physical activity and environment.

Although carbohydrate rich diets were recommended in the past, specific recommendations in percentages should be used with caution. For example in a 5,000Kcal diet, a 50% of energy in carbohydrates will provide 7g to 8g/g/Kg of body weight for a 70Kg athlete. On the contrary, a 60% in carbohydrates diet will provide only 4 to 5g/Kg of body weight for a 60Kg athlete.

The proportional increase in carbohydrate requirement increases accordingly the proportional need in number of servings for carbohydrate-based food groups. Thus, many athletes should exceed the upper range of servings for these food groups, that is: a) bread-cereals-legumes: more than 10 servings/day, b) vegetables: more than 5 servings/day, c) fruits: more than 4 servings/day, d) milk-alternatives: more than 3 servings/day. Athletes with lower energy needs of small body shape are advised to select nutrient-dense foods in order to obtain adequate carbohydrates.

Athletes seem to benefit from 200g to 300g of carbohydrates consumed 3 to 4 hours before the athletic event. Pregame meal targets to prepare the athlete for the upcoming event, providing him with carbohydrates, electrolytes and water. Carbohydrates are essential to maintain blood glucose levels and maximise glycogen stores. There is a dispute whether glycemic index of carbohydrates influences performance.

During exercise athletes should consume 30g to 60g carbohydrates per hour (or 0.7g/Kg of body weight) in order to maintain blood glucose levels. This is of extreme importance when the event lasts more than an hour and it takes place in extreme environmental conditions (cold, heat or high altitude).

After exercise athletes should consume 1.0 to 1.5g/Kg of body weight during the first half hour and again every 2 hours for 4 to 6 hours in order to replace liver and muscle glycogen stores.

Carbohydrate intake can enhance training capacity and may consist the trigger point for winning an event and achieving the best possible performance.
Addressing biochemical deficiencies in athletes for performance enhancement.

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Introduction:
In order for an athlete to achieve the highest level of performance, every cell of their organism must be functioning efficiently. Nutrient deficiencies limit metabolic function of their respective biochemical pathways and possibly any subsequent reactions. Optimal biochemical regulation will determine performance whether an athlete is attempting to set a record or heal from an injury. Because every athlete has unique biochemistry, diet analysis cannot predict nutrient status even amongst athletes of the same sport. Every sport has different nutrient requirements and every athlete in that sport will have distinctive needs based on age, medical history, nutrient absorption, metabolism, genetic predisposition and medications. Even high-performing athletes who appear healthy can have deficiencies that make them prone to injury or poor recovery.

Methods:
Laboratory testing reveals the health status of an athlete without bias or judgment allowing for accurate supplementation. Urine and blood analysis are performed to determine direct and indirect measures of specific nutrients. Genetic testing can be performed from the DNA through blood or saliva.

Conclusion:
Identifying and correcting biochemical imbalances is the fastest way to balance the athlete and allows them to reach their maximal genetic potential.

Keywords:
Nutrient supplementation, performance enhancement, biochemical evaluation
The Development of SEM in the UK.

Professor Charles S B Galasko.

Although Sport and Exercise Medicine can trace its roots back over 2000 years it did not start to develop in the UK until the 20th Century. It has gone through several stages.

• The need for the Speciality
• Recognition of the Speciality
• Sports Medicine à Sport and Exercise Medicine
• Establishment of the Speciality
• Development of the Speciality
• Growth of the Speciality

During the 20th Century an increasing number of doctors became involved, looking after teams, going with teams to Olympic Games and other competitions, running sport injury clinics etc. The term “Sports Medicine” was first used in the 1920’s.

The recognition of the speciality started when the three Scottish Medical Colleges established a Board of Sports Medicine which created a Diploma examination that became widely accepted as a safe standard of practice for doctors providing medical services to a number of sports.

Following the intervention of HRH the Duke of Edinburgh in 1997 the Intercollegiate Academic Board of Sport and Exercise Medicine was established in 1998 with Professor Macleod as its first Chairman and Professor Galasko being Chairman from 2002. It was during his Chairmanship that the UK recognised SEM as a speciality in 2005, rather than as a sub speciality, and the Academy of Medical Royal Colleges agreed that an Intercollegiate Faculty of Sport and Exercise Medicine could be established. In September 2006 HRH the Princess Royal launched the new Speciality and Faculty.

This period saw the first curriculum for SEM which has been used as a template in many other countries.

The Faculty has been recognised as the governing body for SEM in the UK and, inter alia, set the standards and competencies required for doctors to go onto the Specialist Register in SEM, developed the curriculum and examination, established training programmes throughout the UK, and is involved in CPD and appraisals.

Because of the recognition of the value of exercise and other forms of physical activity in improving and maintaining health, Sport Medicine has developed into Sport and Exercise Medicine. However, despite its benefits, physical activity is associated with complications, particularly injury and sudden death. Unfortunately, the facilities for treating soft tissue injuries are inadequate. The role of a Consultant in SEM includes running sports medicine clinics, rapid access soft tissue clinics, exercise medicine clinics and supervised exercise prescription, workplace wellness, public health, musculoskeletal clinics, combined musculoskeletal clinics and musculoskeletal procedures.

In the future the majority of SEM consultants in the UK will work in the NHS but others will work in private practice, in the military, in corporate settings. Their work will include working with sportsmen and women of all abilities, with special groups and with the rehabilitation of able and disabled sportsmen and sportswomen. Some will work within universities, be involved with research or work in public health.
2nd Congress of Ecossep and 12th Scientific Conference in SEM, CSEM, QMUL

Key Note Lecture - Saturday 11th September 2010

Development of Sports & Exercise Medicine in Ireland and Future Challenges.

Dr. Philip E. Carolan.
Dean
Faculty Sports & Exercise Medicine RCPI & RCSI

The Faculty of Sports & Exercise Medicine was set up in September 2001 and is a joint Faculty of the Royal College of Physicians & Royal College of Surgeons in Ireland.

The Medical Council gave the Speciality, Specialist recognition in May 2004 and to date there are 25 doctors on the Register of Medical Specialists in the Division of Sports & Exercise Medicine. The Faculty has developed a curriculum for Higher Specialist Training; this is a 4 year training programme which includes a number of core specialities that trainees must complete (i.e. A&E, Cardiology/Resp Medicine etc). All trainees will have completed a BST programme and should have completed some Postgraduate course such as an MSC in SEM. Our curriculum is very similar to FSEM (UK) HST training programme and both Faculties have collaborated over the curriculum development. Unfortunately we have not secured funding for a programme and trainees need to apply prospectively to the Faculty to outline their training programme rotations for accreditation. This has become more difficult for trainees with changes to the Irish Medical Council Register where trainees need to be in approved training numbered posts. We continue to work with the Medical Council, Health Service Executive & the Forum of Postgraduate Training Bodies. Part 11 of the Medical Practitioner Act 2007 was commenced in May 2010, bringing Competence Assurance into law, this will drive the need for a training programme and developing CPD programmes. Going forward, further development of Postgraduate programmes in Sports & Exercise Medicine for doctors with a special interest in Sports & Exercise Medicine is very important at either MSc or Diploma Level. The Faculty continue to work on developing continuous education programmes with a new Diploma course in conjunction with the Irish College of General Practice. E-learning programme development in conjunction with the NUI colleges should be explored. For development of the Speciality, UEMS recognition is a must with an agreed Specialist Training programme curriculum that can be delivered throughout Europe. I believe that both Faculties from Ireland and UK can collaborate on having a greater input on such developments.
University of Craiova is one of the most important university in Romania. It includes also Faculty of Physical Education, Sport and Kinesiology that prepare the future specialists in sport performance, trainers and sport rehabilitation. Most of the teachers of this faculty are sports medicine physicians and they have also medical activity in the Sport Medicine Department of Emergency Hospital Craiova.

In our university we coordinate the programs that included important aspects of sports medicine like: anatomy and biomechanic, physiology and sport physiology, rehabilitation and recovery in sport, sports medicine in chronic diseases. Practical activity included working with sports centers from the south region of Romania, by specific assistance to athletes in sports medicine department of our hospital. The sports medicine physicians in according with european standards of sports medicine speciality give specific assistance by: clinical examination, cardiology exam, orthopedic and rehabilitation exams, assessment of effort capacity and functional assessment, biometric assessment. The final diagnosis helps the athletes to have the best recommendations for effort, nutrition, recovery and rehabilitation.

At our university we have a research centre named “Research centre for study human body motricity”. This research centre has an activity in according with european ethics recommandations. It has departments for research in field of sports medicine and sport performance, sport rehabilitation using results of fundamental research regards how the sport activity induce functional and structural changes of human body. The centre has the following departments: motric anthropology, structural anthropology, kinesiology, physical therapy, sport medicine, statistic analyze of research. Focus groups of our research are physicians from sports medicine, orthopedics, rehabilitation and also athletes and trainers.

Research activity in field of sports medicine is developing in relation with practical activity in field of sports by cooperation with sports centers like: athletic team, football teams, voleyball, handball and basket teams.

In Romania sports medicine is a medical speciality and the future specialist have to prepare in this field for four years and they obtain the title of sports medicine physician specialist. During four years, they obtained the knowledge of traumatology, physical therapy, cardiology assessment of heart athletes, sport specific adaptations and specific rehabilitation and training.
Shoulder laxity and traumatic shoulder instability in professional rugby players.

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Introduction:
This study aimed to see whether the risk of shoulder dislocation is associated with innate shoulder laxity, in professional rugby players.

Methodology:
We performed a pilot study where we validated techniques we used in the study and subsequently gained ethics committee approval. We visited all the premiership rugby clubs in England and assessed 169 professional rugby players with no history of shoulder instability and 46 players with clinical instability symptoms in one shoulder. We assessed shoulder laxity by means of clinical evaluation, questionnaires and ultrasound. Previous studies have shown no difference in shoulder laxity in left and right shoulders in normal individuals. We therefore compared the laxity in the uninjured shoulder of players with a previous history of dislocation, with the shoulders of players with no history of shoulder injury. Data was analysed by unpaired t-tests.

Results:
The results showed there was no significant difference between the left and right shoulders in players with no history of instability (P>0.05). Players with a history of instability had a significantly higher shoulder translation in their normal shoulder than uninjured players (P<0.05). Players with an anterior laxity of at least 4mm had a 50% chance of sustaining a dislocation. There was no correlation between, the age of the player, dominant hand or position played and the incidence of increased laxity.

Conclusions:
This is the first study looking at laxity and the risk of shoulder dislocations in sportsmen involved in a high contact sport. These results support the hypothesis that rugby players with “lax” shoulders are more likely to sustain a dislocation or subluxation injury to one of these lax shoulders in their sport. We believe pre-season screening and targeted training may play a role in identifying those at risk and may decrease the incidence of dislocations.
The role of physical activity on cardiometabolic risk in adult Greek women.

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Introduction:
Cardiovascular disease (CVD) is the leading cause of death in Western populations. In clinical practice, the goal is to identify high-risk individuals, since global CVD risk information may contribute to CVD prevention. Therefore, it is important to take into account the metabolic syndrome-related CVD risk, as well as the risk posed by traditional CVD risk factors. Several studies have shown that physical inactivity is an independent risk factor for CVD, although it is not included in the traditional cardiometabolic risk factors. Limited information exists about the prevalence of cardiometabolic risk factors, the role of physical activity on them and the burden of CVD in the adult female Greek population.

Purpose:
The purpose of this study was to examine the effects of physical activity on the cardiometabolic risk factors in Greek healthy adult women.

Methods:
Eighty eight women, aged 45.4±6.9 years, without any chronic disease, volunteered to participate in this study. All women were submitted to medical and anthropometric evaluation (measurement of waist circumference, weight, BMI and blood pressure) and laboratory testing for: total cholesterol, LDL, HDL, triglycerides, glucose, CRP, apoA1 and apoB (automatic biochemical analyzer, Roche). Finally, all women filled-in a questionnaire of physical activity (International Physical Activity Questionnaire-IPAQ).

Results:
Of the total sample, 60.2% had a positive family history of CVD, 46.6% were smokers and 9.1% alcohol drinkers. Physical activity, based on the IPAQ, was found to have a mixed impact on the traditional cardiometabolic risk factors, by affecting mainly the levels of total cholesterol and HDL cholesterol. There was no correlation found among physical activity, blood pressure and the rest of the studied biochemical parameters in women.

Conclusions:
Increased physical activity can reduce the cardiometabolic risk and improve the lipid profile in Greek adult women. Our results indicated that regular physical activity of any kind is essential for fitness and health. All health care professionals are encouraged to inform, consult and motivate individuals to be active.
Low-Level Laser Therapy (LLLT) for discogenic back pain.

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The aim of this study was to investigate the effect of low-level laser therapy (LLLT) on low back pain documented by History, clinical examination, MRI findings of the Lumbar Spine and by patients’ pain scores. Thirty nine (39) individuals with diagnosis of low back pain were enrolled in randomized, double – blind, placebo – controlled trial, but thirty two (32) participants completed the therapeutic protocol. After enrolment, symptomatic individuals were randomly assigned to receive LLLT, or identical placebo, for 6 weeks. MRI was performed at baseline of therapy. The subjective low back pain was recorded at baseline and after treatment on a visual analogue scale (VAS). After LLLT, low back pain in both groups showed significant change over the experimental period and there was a difference (before treatment and after treatment) in discogenic back pain between the two groups. Pain estimation on the visual analogue scale had improved significantly in all test situations (after night rest, daily activities) after LLLT when compared with that of the placebo group. Additionally when the difference in pain scores was compared between the two groups the change was statistically significant. In summary, while MRI findings are able to depict the morphologic changes related to discogenic back pain, 905nm gallium - arsenide (GaAs) infrared laser may contribute to healing and pain reduction in discogenic low back pain.

Keywords:
Discogenic Low back pain, Low Level Laser therapy, MRI, Visual Analogue Scale (VAS).
Re-injury following acute posterior thigh injuries in elite track and field athletes.

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Introduction:
Hamstring muscle strains can lead to an increased risk of re-injury. We recently proposed a clinical classification system for acute hamstring strains. We studied the effect of the grade of the initial injury on the subsequent risk of re-injury. We hypothesised that there would be no difference in re-injury rate between acute low grade (grade I and II) and high grade (III and IV) hamstring muscle strains.

Methods:
Between 1994 and 2007, we managed 165 elite Greek track and field athletes with acute, first-time unilateral hamstring muscle strains. Using a validated classification system, strains were classified into 4 grades (I, II, III and IV) based on objective clinical criteria (knee active range of motion deficit at 48 hours). The same rehabilitation protocol was prescribed to all athletes and the rate of re-injury was recorded during the following 24 months.

Results:
At follow up, 23 of the 165 athletes (13.9%) had experienced a second hamstring muscle strain. Of the 75 athletes presenting with a grade I injury, 7 (9.3%) had experienced a recurrence after 24 months. Of the 58 athletes presenting a grade II injury, 14 (24.1%) experienced a recurrence. Of the 26 athletes presenting a grade III injury, 2 (7.7%) experienced a recurrence and of the 6 athletes presenting a grade IV injury, none had experienced a recurrence after 24 months.

Conclusions:
According to our classification, athletes with acute grade II hamstring muscle strains experience a higher risk of re-injury than athletes with grade I or grade III strains. Low grade hamstring muscle sprains lead to a higher risk of re-injury than high grade hamstring muscle sprains. Objective clinical findings can accurately predict the risk of re-injury following acute hamstring muscle strains.

Keywords:
Hamstring; Injury; Recurrence
Low back pain in elite track and field athletes.

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Introduction:

Low back pain is an extremely common symptom, not a disease, and has many causes with disc pathology being the underlying reason in most of the cases. The aim of this study is to investigate and compare the causes of low back pain (LBP) in elite track and field athletes of their different events.

Material And Method:

Retrospective cohort study of S.E.G/A.S. sports clinic LBP reports compiled by certified physicians between 1988 and 2008. The participants were 18 to 26 year-old male and female elite track and field athletes with low back pain. The main outcome measure was an analysis of aetiology of LBP at three event categories athletes: throwers, jumpers, and sprinters and their lumbar pain problems were categorized at discogenic (disk herniation, derangement, bulging, or disc protrusion), muscle injuries, back element injuries (spondylolysis, spondylolisthesis, facet joint syndrome), complex (combination of the categories above) and other problems (Scheuerman disease, compression fractures, etc).

Results:

Ninety-four athletes with low back pain (44 sprinters, 29 throwers and 44 jumpers) which visited the sport clinic totalling 184 times (a percentage of 3.6% at a total number of 2591 injured athletes) were included in the study. When evaluating all events concurrently discogenic problems was the most common cause of low back pain followed by muscle and back elements injuries with the same percentage and then complex problems in which the discogenic causal element prevailed.

Conclusion:

When evaluating all these three categories it clearly shows the prevalence of discogenic aetiology lumbar pain in these categories of athletes.
Treatment of talar osteochondral lesions using local osteochondral talar autograft mid term results.

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Background:
Osteochondral lesion of the talus (OLT) is a broad term used to describe an injury or abnormality of the talar articular cartilage and adjacent bone. A variety of treatment methods exist for OLT. The use of local osteochondral talar autograft is an established treatment method for such articular cartilage defects. We present a series of patients treated this way for osteochondral defects of the ankle, and assess the functional and clinical long-term results.

Materials and Methods:
From March 2005 to December 2008, 11 patients underwent implantation of local osteochondral talar autograft for OLT, 6 male and 5 female. The graft was harvested from the medial or lateral talar articular facet on the same side of the lesion. Graft sizes ranged from four to eight millimeters in diameter. Age ranged from 19 to 53 (mean 38) years. Sports related injury concerned 8 patients and the duration of symptoms was mean 65 months (range 6 to 98). Mean follow-up was 41 months (range 16 to 61). Preoperative and postoperative results evaluated used the AOFAS score. Special diagnostics studies performed preoperative, MRI (11 patients), CAT (11 patients), Bone Scan 2 patients and weight-bearing radiographs to all of them to evaluate the injury.

Results: All osteotomies healed. The AOFAS average score improved from mean 65 pre- to 89 postop. The AOFAS score was slightly higher in patients under 40 years of age and in those without pre-existing joint arthritis. Concerned satisfaction all the patients would have the procedure again. The most common post op complaint was a mild ache at anteromedial joint line of the ankle. There were no complications in the study group. Most returned to pre injury level of activity. Two patients had a second look arthroscopy one 6 and one 12 months post because of impingement of lateral malleolus the first and debridement of anterior tibial margin the second. Both of them had incorporation of the graft into the surrounding talar dome cartilage.

Conclusion:
We believe treatment of talar osteochondral lesions using local osteochondral talar autograft is a reliable treatment method. The long-term results confirm that it is a well-accepted procedure from the patients with no high risk of complications compared to other procedures.
Foot and ankle injuries during the Athens 2004 Olympic Games.

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The Athens Olympic Games in 2004 represented a significant sporting and medical challenge. Major, rare and complex incidents can occur at any mass gathering sporting festival and team medical staff should be appropriately prepared for these. During the 2004 Olympic Games, injuries in all sport tournaments (men’s and women) were analyzed. A total of 624 injuries (520 soft tissue injuries and 99 bone injuries) were reported. The most prevalent diagnoses were contusions, sprains, fractures, dislocations and lacerations. Significantly more injuries in male (68%) versus female athletes (32%) were recorded. The incidence, diagnosis, and causes of injuries differed substantially between the team sports. 

This study concerns an epidemiologic analysis to determine the incidence rate of foot and ankle injuries and also the treatment options of these lesions in the field and in short term during the time frame of the Games. Also analyze the function modalities of the Foot and Ankle Clinic, the necessity of the establishment of a well organized Foot and Ankle department and the cooperation of the different medical specialities that deal with foot and Ankle Sport Injuries.  

Keywords:  
Athens Olympic Games, foot and ankle injuries/sports injuries
Sudden Cardiac Death in Athletes: A Case Review.

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Abstract - Saturday 11th September 2010

Introduction:
Cardiomyopathies are diseases of the heart muscle. The WHO defined the disorder in 1980 as “heart muscle disease of unknown cause”. The particular type of cardiomyopathy most connected to sports athletes and to this particular case is that of Hypertrophic Cardiomyopathy. HCM is characterised by left and occasionally right ventricular hypertrophy. It is the most prevalent genetic cardiac abnormality, affecting at least 1:500 of the adult population in the absence of aortic valve disease or systemic hypertension. In approximately 60-70% of patients, HCM is caused by mutations in the sacromeric contractile protein genes and is transmitted via an autosomal dominant trait with incomplete penetrance, the most common mutations being in the beta-myosin heavy chain and the cardiac myosin-binding protein C genes.

The incidence of SCD in professional athletes is actually quite low, estimated to be between 1/50,000 to 1/300,000 athletes over a 10-20 year period however the incidence amongst non-professional athletes partaking in high light intensity activities is significantly higher. I hope that this particular case, which is an extreme in its example would high the dilemma that exists in modern non-professional sporting bodies, in particular in Ireland and the need to address the need for screening to prevent such deaths occurring in athletes.

Case:

This 47 year old man initially presented to casualty in 2007 with a profound presyncopal episode. This particular episode was not associated with exertion however on checking his history, it was noted that his younger brother had died suddenly in the 80's whilst playing a hurling match. Subsequently, a number of years later, this gentlemans brother was diagnosed with a cardiomyopathy and was being worked-up for a transplant when he also died suddenly. His father also died suddenly in his early 70's with post mortem revealing a cardiomyopathy. With such a history and presenting symptoms, a major cardiac work-up was undertaken including the implantation of a loop recorder for 13 months which revealed numerous salvos of non-sustained VT, a coronary angiogram which failed to show any ischaemic disease, multiple stress testing, a cardiac MRI which revealed significant myocardial fibrosis and cardiac genetic testing for query arrhythmogenic right ventricular cardiomyopathy/hypertrophic cardiomyopathy, the results of which are awaited.

This gentleman was initially assessed by a cardiologist in 2008 and at the time this assessment was being performed, he was been treated with anti-arrhythmic medication and the advise of exercise intensity reduction to very mild levels were given. He managed with this treatment for a period of time, however in March of this year was admitted with another pre-syncopal episode, at which point the decision to put a intra-cardiac device(ICD) was made.

This case exhibits the extreme of what is a relatively common genetic disorder of otherwise young healthy adults. The media has well advertised the more high profile cases in Ireland in recent years however the dilemma that now exists is should there be an incentive for all sporting bodies to initiate screening programs for these disorders prior to athletic participation, and hence attempt to avoid sad and disastrous cases like that of this gentleman and his family.
Gene, injury and performance.

Professor N Maffulli

The limit of each individual to perform a given type of exercise depends on the nature of the task, and is influenced by a variety of factors, including psychology, environment and genetic make up. Genetics provide useful insights, as sport performances can be ultimately defined as a polygenic trait. The physical performance phenotypes for which a genetic basis can be suspected include endurance capacity, muscle performance, physiological attitude to train and ability of tendons and ligaments to withstand injury. The translation of an advantageous genotype into a champion’s phenotype is still influenced by environmental, psychological and sociological factors. Since exercise training regulates the expression of genes encoding various enzymes in muscle and other tissues, genetic research in sports will help clarify several aspects of human biology and physiology, such as RNA and protein level regulation under specific circumstances. Genetic testing in sport would permit to identify individuals with optimal physiology and morphology, and also those with a greater capacity to respond/adapt to training and a lesser chance of suffering from injuries. Ethical and practical caveats should be clearly emphasized. The current scientific evidence on the relationship between genetics and sports look promising. There is a need for additional studies to determine whether genome-wide genotyping arrays would be really useful and cost-effective.

Sudden cardiac death in the young.

Dr Sanjay Sharma

The sudden death of a young (< 35 years old) is a particularly tragic event given the potential number of life years lost. There are between 10-12 sudden cardiac deaths in young individuals per week in the UK. Most deaths are secondary to inherited or congenital abnormalities of the heart, the commonest being the hereditary cardiomyopathies. The phenotypic manifestation of some of the disorders implicated is heterogeneous and therefore expert input is essential. Most disorders can be diagnosed using non-invasive investigations and treatments range from life style modifications to cardiac surgery.

Objectives

To define:

1. Magnitude of the problem
2. Demographics of the victims
3. Causes of sudden cardiac death
4. Clinical manifestations of disorders
5. Investigation and management of conditions causing sudden cardiac death
The role of the sports and exercise medicine physician in the National Health Service.

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Objectives:
To investigate the opinions of general practitioners, orthopaedic surgeons, rheumatologists, sport and exercise medicine (SEM) registrars and public health consultants on training, caseload, the most appropriate setting and the position of SEM within the National Health Service (NHS) in the UK.

Method:
A cross-sectional questionnaire-based survey investigated the opinions of the above professionals from three primary care trusts and associated hospitals in London and Birmingham.

Results:
With a 50% response rate (n=226), 93% (208/224) of participants felt that there was a role for SEM in the NHS. 56% (124/223) agreed that this role should be in both primary and secondary care. 64% (136/212) of participants felt that their practice would benefit from the input of a SEM physician and 95% (191/202) would consider referring patients to SEM services. 74% (165/222) agreed that SEM should have a public health role, and 63% (140/222) believed that these responsibilities should be evenly balanced with the treatment of sports injuries. Despite the emphasis on public health work from SEM policy makers, none of the SEM registrars selected public health as an important training area. 31% (44/140) of participants felt that a lack of education in the medical profession regarding SEM represented the greatest hindrance to its development in the NHS.

Conclusion:
Several areas of agreement were demonstrated across the specialties, many of which matched the views of policy makers. This study involved participants from a range of cognate disciplines and was the first to investigate this issue since SEM was recognised as a specialty in 2005.

Keywords:
Sports and Exercise Medicine, Sports and Exercise Medicine Physician, Role.
Is soy milk a better recovery aid compared to semi-skimmed milk after exercise? Does it increase time to exhaustion in trained cyclists?

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**Introduction:**
Milk has been proven to be a popular recovery drink for trained cyclists to achieve high profile results because milk contains Carbohydrates (CHO) and Protein (PRO). On the other hand, research has now shown that Soy milk can be just as effective as Semi skimmed milk as it contains the same high quality protein.

**Method:**
For the first visit, 8 male trained cyclists took part in a maximum oxygen consumption test (V02 max) to determine each participant’s V02 max and maximum power output (Pmax).

The second visit consisted of the glycogen depletion trial where each participant had to cycle at 90% of their Pmax for 2 minutes and then cycle for 2 minutes at 50% of their Pmax. This was in a form of intervals and continued until participants could no longer maintain their pedal rate. The % was then decreased to 80%, 70% and 60%.

This was followed by a 4 hour recovery period. Participants were given 355ml of Soy milk or Semi skimmed milk in a double blind, randomized design at the start and then 2 hours into the recovery process. Both drinks were masked with 10g of cocoa powder.

The Endurance trial followed which required participants to cycle at 70% of their Pmax until exhaustion. Heart rate, Body Hydration, Blood Lactate, Food diaries and Gastrointestinal Distress Questionnaire (GDQ) were variables that were also measured throughout.

**Results:**
Time to Exhaustion (TTE) at the end of the endurance trial showed 6 out of 8 participants cycled for longer with Semi skimmed milk (11.9 ± 3.6min). Only 2 participants cycled longer with Soy milk (9.9 ± 3.2mins). There were no significant differences in the results or any of the variables measured.

**Conclusion:**
The present study did not reveal significant results when testing for the relevance of the ingestion of Soy milk over Semi skimmed milk.

**Key Word:**
Carbohydrates, Protein, TTE
A reliability assessment examining the inter- and intra-observer reliability of the current England and Wales cricket board musculoskeletal profiling protocol

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Background:
The England and Wales Cricket Board (ECB) Musculoskeletal Profiling was first introduced in 2005 and has been developed over the past four seasons with the aim of identifying risk factors for injury in elite level cricketers aiding both injury prevention, and rehabilitation. The ECB Physiotherapy Team carries it out at six monthly intervals. The ability of such a tool to accurately predict injury risk, and to provide useful information for rehabilitation is entirely dependent on the ability to produce valid and reliable results.

Study Aim:
To examine the inter- and intra-observer reliability of the current system in the hands of two experienced Sports Physiotherapists examining elite level cricketers.

Methods:
Using the prescribed testing protocol eight members of the England under 19 cricket squad were examined on two occasions by two Sports Physiotherapists who have worked in elite level Cricket. Statistical analysis was carried out to determine the inter- and intra-observer reliability of the tests.

Results:
Of seven range of motion tests included in the study four showed “almost perfect” reliability, an ICC of greater than 0.8, this level is reported to be an acceptable for screening in an elite sport setting. Only two of the tests examined demonstrated inter-rater reliability of greater than 0.8.

Conclusion:
The ECB musculoskeletal profiling system is crucial to early identification and modification of injury risk factors. It is well designed and based on current sports injury literature, but can not be efficacious in the absence of reliable testing. Only two of the current tests have sufficient inter-observer reliability for use in screening elite sportsman, four demonstrating acceptable intra-observer reliability. One of the tests (modified Thomas test) demonstrated such poor reliability to question it’s inclusion, this study highlights the need to investigate ways to improve the reliability of other tests in the profiling system.
Experimental study into forearm compartmental pressures.

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Introduction:
Chronic compartment syndrome is well recognised, although rare in the forearm. In our chronic compartment syndrome clinic, we successfully identified and treated four cases. This prompted a literature review searching for normal ranges of forearm compartmental pressures. Existing normal forearm pressure ranges are based on lower limb measurements. This study aimed to establish normal pre and post-exercise forearm pressures.

Methods:
Using a Stryker intracompartmental pressure monitor, forty-one participants underwent pressure measurements of the superficial extensor and flexor forearm compartments before and after exercise.

Results:
Normal ranges for pre-exercise extensor compartment (2-27mmHg, upper CI 18.8-25.2mmHg), post-exercise extensor compartment (2-24mmHg, upper CI 16.8-22.8mmHg), pre-exercise flexor compartment (1-19mmHg, upper CI 13.3-17.4mmHg) and post-exercise flexor compartment (0-19mmHg, upper CI 16-21.4mmHg) pressures were established. No significant pressure difference was found after exercise (extensor pressures; p=0.41, flexor pressures; p=0.21). There was no correlation between whether pressures increased or decreased following exercise. There was significant sex difference (extensor pressures; p=0.04, flexor pressures; p=0.008). Normal ranges for the extensor compartment were; 0-25.2mmHg and for the flexor compartment; 0-21.4mmHg.

Conclusions:
This study showed a significant difference in normal forearm compartment pressures between sexes. A normal reference range of forearm compartment pressures to aid diagnosis of chronic compartment syndrome has been determined. This may also prove useful in aiding diagnosis of acute forearm compartment syndrome.

Keywords:
Compartment pressure, chronic compartment syndrome, forearm
Electrocardiographic abnormalities and diagnostic criteria in athletic overtraining.

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The overtraining syndrome describes the condition of prolonged imbalance between training load and recovery, with increased incidence in high level performance sports. Is very important to manage this syndrome not only for the consequences at the performance of the athlete, but also because of the potential risk of athlete’s health. Although the symptoms vary from one person to another, this syndrome enclose decrease in athletic performance, prolonged fatigue, electrocardiographic changes and psychological symptoms.

The aim of the present study was to provide some aspects of cardiovascular consequences and electrocardiographic abnormalities that may be seen and to up to date the diagnostic criteria of detecting this syndrome, by using as method a systematic revision of the literature.

Electrocardiographic abnormalities at this syndrome include extreme low heart rate, T wave inversions, atrial-ventricle block, ST segment depressions, atrial-ventricle dislocation and many type of arrhythmias. There happens a cardiac autonomic imbalance with extensive autonomic modulation of the athlete, depressed left ventricular function, impairment of the maximal anaerobic capacity with a reduced tolerance of acidosis and decreased of maximum oxygen consumption.

Although of the multitude of publications for overtraining syndrome, actually we have limited available tools for valid diagnosis. Thus, is important the role of prevention by monitoring of the athlete by the sports physician, controlled training, ECG records and sufficient recovery.
Training risk factors associated with wrestling injury.

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Introduction:
Wrestling is a strength sport that requires a large amount of muscle stamina superior flexibility, control and intensive training. The incidence of traumatic and overuse injury is high (1,3). The purpose of this study is to determine injury risk factors associated with wrestling training.

Methods:
120 (male and female) wrestling students aged 18 to 26.5 years were recruited from NSA. We retrieved through injury survey, information regarding chronic injuries, most recent wrestling related injuries as well as treatments, training history and awareness of injury prevention strategies. Risk factors were analyzed by Pearson's correlation, ANOVA and t-tests.

Results:
The results indicate that 45.8% of wrestlers had sustained an injury within the past 6 months. The majority of wrestlers (52.5%) reported being affected by chronic injuries at the time of the survey. Age of onset for wrestling-related and chronic injuries averaged 15 and 17 years. The knee and ankle (4) were the most common sites of injury (35%). Arms, shoulders, and hands injuries account for 20% of all injuries. The majority of participants (82%) who required treatment for their most recent wrestling-related injuries consulted a physiotherapist (2). Two of the significant risk factors for injuries were training over 8 hours per week (p<0.001) and the training methodology.

Conclusions:
An individual training threshold may exist for wrestlers, which if exceeded, increases the risk of injuries. In freestyle wrestling these injuries most commonly affect the knee and ankle. A well – planned weekly training load may reduce injuries. As participation in sport activity does not increase injury risk, cross-training may improve these athletes’ fitness during competition period. Physiotherapists and coaches have a role in developing such a training program.

Keywords:
Injuries, physiotherapy, wrestling

References:
Accelerated rehabilitation following bilateral consecutive matrix autologous chondrocyte implantation in the knees of an elite skier.

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Purpose:
To present our experience with an interesting case of bilateral consecutive MACI in the knees of an Olympic level skier. The rehabilitation protocol applied had a few but significant differences compared to other protocols, regarding the rate and methods of increasing joint loading during the early phases of rehabilitation.

Methods and Materials:
A 29-year old, alpine skier with bilateral chondral lesions of the trochleas and the left lateral femoral condyle. Preoperative IKDC subjective score was 58(L) and 62 (R). In October 2007, he underwent bilateral knee arthroscopic evaluation and cartilage biopsy. In November 2007 the first MACI was conducted in his left knee, and the second MACI in the right knee in March 2008. A second look arthroscopy took place in the left knee. The rehabilitation protocol followed the guidelines outlined by Hambly et al (2006) with a few modifications:
- Non weight bearing (NWB)
  (left knee): 4 wks    (right knee): 1 wk
- Full WB
  (left knee): 6 weeks    (right knee): 4 wks
- Closed kinetic chain exercise (rowing - free handed)
  (left knee): 6 wks    (right knee):6 wks
- Intermitent compression of repair site with use of dynamometer: Controlled isometric contractions in angles that engaged the repaired sites. the applied load was controlled via optical biofeedback from dynamometer.
  (left knee): 8 wks   (right knee): 10 wks

Results:
The athlete was able to return to acceptable performance levels on the exercise physiology lab at 8 months. He was able to participate in high level races by 12 months. His 12 month IKDC score reached 94 (L) and 88 (R).

Conclusions:
Accelerated rehabilitation with the inclusion of controlled intermitent compression of the repair sites early in the rehabilitation process is safe and may promote tissue regeneration at a faster rate than previously thought.
The influence of three 48-hour dietary protocols on metabolic parameters during the maximal incremental treadmill test.

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Introduction:
There are no protocol recommendations pertaining to nutrition before the performance assessment. The aim of this study was to determine the influence of three various 48-hour dietary protocols on parameters obtained during three trials of the maximal incremental treadmill test.

Methods:
Thirteen physically active subjects (age: 25.73±3.09) underwent all-out treadmill test using a breath-by-breath analyzer. During the 13-day experiment, the subjects were submitted to the three controlled 48-hour dietary protocols. The obtained data was divided in three subgroups with respect to dietary conditions that prevailed during each trial. Three 48-hour dietary protocols consisted of (1) a low carbohydrate (CHO) diet 1.06 g/kg body mass of CHO; (2) a mixed diet 2.6 g/kg body mass of CHO; and (3) a high carbohydrate diet 5 g/kg body mass of CHO.

Results:
The results confirmed the difference in the observed metabolic parameters after implementing the 48-hour high-carbohydrate diet. It is important to note that the metabolic indicators corresponding to the anaerobic threshold and maximal work load significantly change and reach higher values under the influence of a high-carbohydrate diet at maximal workload. Respiratory exchange ratio and blood lactate concentration contributed the most to the observed differences (p<0.03).

Conclusions:
Energy sources pertaining to different nutrients have to be accurately defined and balanced during both competition but also functional testing. Otherwise, errors can occur in the given physiological parameters which serve as the guidelines for planning and programming the training process, which is a precondition for maximizing the competition performance. An athlete, before the physiological assessment, should take approximately the same amount of carbohydrate (>75%) and other nutrients, just like before a competition depending on duration and intensity of the sports activity.

Keywords:
48-hour carbohydrates dietary protocol, metabolic parameters, maximal incremental treadmill test
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1990-1994 Olympic Training Centre Frankfurt/Main
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Biomechanics of movement disorders and motor therapy in patients with Parkinson’s disease

Miss Toni Ardolino

Toni Ardolino was born in Kent and qualified from the University of Nottingham Medical School in 2003. She was based in Oxford and London for basic surgical training and moved to Wessex to commence the Trauma and Orthopaedic registrar rotation in 2008. Clinically she has most recently worked in Southampton Hospital but is currently taking a year out of training to work in Whitehall as a Clinical Advisor to the Chief Medical Officer. She completed a Masters in Trauma Surgery at the University of Swansea in 2009 and has an interest in Trauma. She enjoys teaching and is now enrolled on a Post Graduate Certificate in Medical Education. Toni was part of the Trainee Advisory Committee for eSurgery and wrote the first eSession. This was a collaborative project between the Royal College of Surgeons and the Department of Health. She has participated in clinical research on compartment pressures and has a couple of ongoing projects. She lives in Winchester with her husband James and other interests include motor boating, waterskiing, windsurfing and baking.

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He defended his Thesis 2008, “Hamstring muscle strain”, and won the 2008 European Athletics Innovation Award for his paper “Hamstring muscle strain in sprinters”. His ongoing research deals with different types of acute hamstring strains in especially soccer/track and how to optimize the rehabilitation period.
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Phone: 00 49 69 798 245 43  Fax: 00 49 69 798 245 92  E-mail: Banzer@sport.uni-frankfurt.de

Education, professional qualifications
General Practitioner, Specialist in Sports Medicine, Manual Medicine, Acupuncture, Nutritional Medicine, Clinical examiner

Sport Scientist
Medical work experience
1987- Practicing physician (Sports Medicine, Manual Medicine, Nutritional Medicine, Acupuncture, Pain Therapy)

Teaching positions
1995 - Present Professor of Sports Medicine, University of Frankfurt
1991-1995 Professor of Prevention and Rehabilitation, University of Frankfurt
1987-1991 Professor of Sports Medicine University Siegen
1981-1986 Teaching Assistant, Department of Sports Medicine, University of Frankfurt

Functions (selection)
• Member of the EU Expert Group Physical Activity Guidelines
• Member of the Steering Committee of the German Federal Association for Prevention and Health www.bvpraevention.de
• Member of the Platform on Diet, Physical Activity and Health of the European Union
• Member of the Steering Committee of the European network for the promotion of health-enhancing physical activity (HEPA/WHO) www.euro.who.int/hepa
• Member of the Advisory Board for the Development of Sport of the German Olympic Sports Confederation (DOSB) www.dosb.de
• Vice President of the Scientific Advisory Board of the German Medical Acupuncture Association (DÄGfA) www.daegfa.de
• Member of the Scientific Committee of the 1. German Hospital for Traditional Chinese Medicine
• Member of the Editorial Board Photomedicine and Laser surgery
• Member of the Scientific Committee of the Journal AAM
• Senior Editor of the Journal of Acupuncture & Meridian Studies

Memberships (selection)
• American College of Sports Medicine (ACSM)
• World Association for Laser Therapy (WALT)
• European College of Sports Sciences (ECSS)
• European Medical Laser Association (EMLA)
• German Association of Sports Medicine and Prevention (DGSP) www.dgsp.de
• German Association for the Study of Pain (DGSS) www.dgss.org
• German Association of Manual Medicine (DGMM) www.dgmm.de
• Society for Orthopaedics Traumatology and Sports Medicine (GOTS) www.gots.org

Publications
Over 100 publications in various international journals
For a selection of recent publication please go to: http://www.sportmedizin.uni-frankfurt.de/Forschung/Publikationen/index.html
CVs

Dr Caroline Barclay

I graduated from the University of Sheffield in 2007 and undertook an intercalated BMedSci in 2005 in Sports Medicine. I completed Foundation training in 2009 in Sheffield and took a year out to study for the MSc in Sports and Exercise Medicine. I commenced ACCS Emergency Medicine training in August 2010 at the Northern General Hospital, Sheffield.

I am a keen hockey player and have played National League with Sheffield Hockey Club and competed at regional and county level. This summer I volunteered as a medic at the Women’s International Hockey Champions Trophy at Beeston Hockey Club, Nottingham where England won the Bronze medal! I also love skiing and running.

Prof Mark E Batt is a Consultant in Sport and Exercise Medicine at The Centre for Sports Medicine, Queens Medical Centre, Nottingham University Hospitals. He has a FT NHS contract and was a recent fellow at The NHS Institute for Innovation & Improvement.

He graduated from Cambridge in 1984 and trained in Family Medicine. He obtained a Diploma in Sports Medicine from the University of London in 1991 and completed a fellowship in Sports Medicine at the University of California, Davis (UCD) in 1993. The next two years were spent as a faculty member in Family Medicine at UCD and as a team physician at the University of California, Berkeley.

Since 1995, he has been in Nottingham as a Consultant/Senior Lecturer in Sport and Exercise Medicine at the Queens Medical Centre: appointed Special Professor in 2004. He was recently Clinical Director for Trauma and Orthopaedics. He acts as clinical advisor for the Nottingham MSc/Diploma courses in Sports Medicine.

He has served as a consultant for The England and Wales Cricket Board, The Rugby Football League, British Gymnastics, and The English Institute of Sport. He has been a physician at The Wimbledon Tennis Championships for 10 years.

He is President of the Faculty of Sport and Exercise Medicine and past chair of the FSEM SAC. He chaired the 2004 work-group which produced the case for SEM as a specialty of medicine.

His research interests include: Overuse injuries, particularly groin, low back, lower leg pain (shin splints and stress fractures), tendon disease and exercise in the workplace.
Sukhbir Bhullar

Date of Birth: 05/02/81
Home/Correspondence Address: 28 Clevedon Drive, Early, Reading, Berkshire. RG6 5XE
Email: SBhullar@doctors.org.uk Telephone: 07780507590

Career Plans
Dual competency: Consultant in Sports and Exercise Medicine and Consultant in Emergency Medicine

Education
2009-2010 Sports and Exercise Medicine (MSc), Queen Mary University of London
2001-2008 Medicine (MBCHB), University of Manchester
2006-2007 Sport Science in Relation to Medicine (BSc (hons)), University of Leeds
1992-2000 GCSEs and A Levels Maiden Elegy School, Reading

Qualifications
MSc Sports and Exercise Medicine (Pending)
MBCHB Medicine& Surgery (Pass)
BSc Sports Science in Relation to Medicine (2:1)

Research
2009 Clinical Audit
Medical documentation in patient notes; Blackpool Victoria Hospital (BVH); Supervisor: Mr. S. Ravi
Analysing patient notes on all surgical wards and assessing whether documentation protocols are being upheld.

2007 Literature Review
Cardiac Rehabilitation; University of Leeds; Supervisor: Dr M Lancaster
Analysing journals, review articles and information from independent authorities to formulate a comprehensive up to date review of the subject.

2006 Project Option
Cellulites Audit; Wythenshawe Hospital (Clinical Decisions Unit (CDU)) Supervisor: Dr S Maurice
Comprehensive literature review on cellulites and departmental audit on the handling of cellulitis patients presenting in CDU, full evaluation of the Cellulites Care pathway used in CDU.

Extra-Curricular Medical Experiences
2009 PRIZE: Foundation Trainee of the Year at BVH (for clinical acumen)
2009 Lecturer on medical finals revision course in Czech Republic
2008/9 Head of FY1 teaching and OSCE organiser to Liverpool University medical students at BVH

Relevant Employment
2008-2011 Foundation Years Doctor: BVH
## Georgios Bikos

**Nationality:** Greek  
**Gender:** Male  
**Date of birth:** 06.07.1977  
**Marital Status:** Married  
**Children:** None  

### Medical And Academic Degrees:

<table>
<thead>
<tr>
<th>Degree</th>
<th>Subject/Speciality and Medical School</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Doctor</td>
<td>Aristotle University Thessaloniki, Greece</td>
<td>2003</td>
</tr>
</tbody>
</table>

### MEDICAL COUNCIL REGISTRATION:

- General Medical Council: Eligible  
- Hellenic Medical Chamber: Member  
- European College of Sports medicine and Exercise Physicians (ECOSEP): Associated member

### KNOWLEDGE OF LANGUAGES:

- Greek: Native  
- English: Fluent

### EMPLOYMENT HISTORY:

#### CURRENT POSITION

- **5 Jan 2009 – Present**  
  1st IKA Hospital of Melissia, Athens  
  **SHO NEUROLOGY**

#### PREVIOUS EMPLOYMENT:

- **Dec 2008 – Feb 2009**  
  ISAKOS Teaching Centre, Thessaloniki, Saint Lukas Hospital, Greece  
  **ISAKOS FELLOWSHIP**

- **Dec 2008-Dec 2009**  
  National Track and Field Center, Sports Medicine Clinic, S.E.G/A.S., Thessaloniki (Kaftantzogleio Stadium)  
  **SPORTS MEDICINE FELLOWSHIP**

- **9 Jun 2008 – 8 Dec 2008**  
  General Hospital of Florina, Greece  
  **SHO ORTHOPAEDICS & TRAUMA**

- **22 Dec 2006 – 21 Dec 2007**  
  G.A. Ferries, Sealines Athens-Rhodes  
  **SHIP’S PHYSICIAN**

- **8 Aug 2005 – 7 May 2006**  
  Hellenic Armed Forces  
  **MILITARY PHYSICIAN**

- **17 May 2004 – 16 May 2005**  
  Herso Health Centre, Kilkis, Greece  
  **SHO GENERAL PRACTICE – A&E**

- **17 Feb 2004 – 16 May 2004**  
  Kilkis Hospital, Greece  
  **SHO GENERAL SURGERY/INTERNAL MEDICINE/CARDIOLOGY**

### TRAINING COURSES AND PRESENTATIONS:

- **20-23/5/2010:** Poster presentation at 24th Panhellenic congress of Neurology at Kos island.
- **15-16/5/2010:** 5th ECOSEP Sports Rehab Seminar (for lower limb), Thessaloniki.
- **21-22/11/2009:** FIMS Team Physician Development Course Diploma (TPDC), Thessaloniki.
- **7-9/10/2009:** Poster presentation at BASEM Annual Congress 2009, Edinburgh, Scotland, UK.
- **28-30/5/2009:** Oral presentation at 2nd Panhellenic congress of Greek College of Sports Medicine, Thessaloniki.
- **16-17/5/2009:** 4th ECOSEP Sports Rehab Seminar (for upper limb), Thessaloniki.
- **13-14/12/2008:** 1st European congress of European college of sports and exercise physicians (ECOSEP) in Thessaloniki.
- **28-29/3/2008:** 9th International and 7th Greek-Cypriot congress of sport medicine in Athens.
- **8-9/6/2007:** ATLS Diploma (Advanced Trauma Life Support) from the university of Patra, Greece.
- **4/2003:** First Aid Seminar of Greek Red Cross.

### SPORTS EVENTS:

- **1-2/8/2009:** Medical service at Panhellenic track & field championship, Thessaloniki.
- **12-13/9/2009:** Medical service at IAAF World Athletics Final 2009, Thessaloniki.
Sally Brown BSc (Hons) MCSP

Currently employed as a full time physiotherapist with British Rowing, she works mainly with the Men’s heavy weight squad who are presently focused on working up to the World Championships in New Zealand at the end of 2010. She is employed by the English Institute of Sport and works out of Bisham Abbey and the Redgrave Pinsent rowing lake. Travelling frequently overseas with the team to training camps and competitions forms a large part of the job. Her previous sporting experience has mainly been with many levels of Rugby including work with London Irish.

Having qualified from Manchester University School of Physiotherapy, she completed her junior rotations at Edinburgh Royal Infirmary. Prior to specialising in full time sport she worked for two years as a senior Physiotherapist at Guy’s and St Thomas’ NHS Foundation Trust in the private outpatient clinic as well as conducting a weekly clinic for the inmates at Brixton Prison.

Sally thoroughly enjoys the challenges that come with working in professional sport and being part of a team striving for the same goals. With the London Olympics fast approaching the next 2 years is expected to be even more exciting.

Dr. Richard G. McB. Budgett OBE
MA, MBBS, MRCP, Dip Sports Med, FFSEM (UK) FISM DCH, DRCOG

Dr Richard Budgett is Chief Medical Officer for the London 2012 Olympic and Paralympic Games. He was Director of Medical Services for the British Olympic Association from 1994 to 2007 and has been Chief Medical Officer with Team GB at six summer and winter Olympic Games and member of the IOC medical commission for the last two. Team doctor to the Great Britain men’s rowing team from 2005 to 2008. Governing Body Medical Officer and team doctor for the Great Britain Bobsleigh Association from 1990 to 2007 attending the Olympic Winter Games in 1992 and 1994. Medical Officer at the Olympic Medical Institute from 1989 to 2009, and since September 2009 at University College London Hospital. In 2003 he was appointed physician for the South East region of the English Institute of Sport (EIS) based at Bisham Abbey. He was appointed Chairman of BASEM in 2008 and was elected to the council of the Faculty of Sports and Exercise medicine in 2007. Chairman of the GB Rowing Medical Committee since 1992 and won an Olympic Gold Medal in rowing in 1984. World Anti Doping Agency list committee since 2005.

Dr. Philip E. Carolan, AFRCSI, FFSEM, FFSEM UK

Dr Philip Carolan is Dean of the Faculty of Sports & Exercise Medicine RCPI & RCSI and a Sports Medicine Consultant in Clontarf, Dublin 3. Philip is the Medical Director of the Cavan County Board Gaelic Football Team.

He graduated from Royal College of Surgeons in Ireland in 1996 and obtained a fellowship in Sports & Exercise Medicine from RCPI & RCSI in 2003 and was elected fellow of the Faculty of Sports & Exercise Medicine UK in 2008. He represents the Irish Faculty on the FSEM (UK) Council

He is team doctor with the Cavan Senior and Under 21 football teams and set up the medical care and treatment protocols for all teams involved in the Cavan County setup.

Currently he is a member of the Medical Scientific & Welfare Committee of the GAA (Gaelic Athletic Association) and Chairman of the Gaelic Games Doctor’s Association. He was involved in the GAA pilot study on cardiac screening of the athlete and the development of the Cardiac Questionnaire for all GAA players.

He is on the Irish Heart Foundation Subcommittee on Sudden Cardiac Death in Sport and is a member of the Ankylosing Spondylitis Awareness Council of Ireland.

Main areas of clinical interest are Groin injuries, Injury Prevention research and Sudden Cardiac Death in sport.
David Carruthers

D.O.B. 18/08/87
Flat 9 Colebert House
Colebert Ave
London
E1 4JP

Education:

Qualifications:
A levels 2005
Biology A
Chemistry A
Music A
Degree 2010
iBSc(Hons) Sports and Exercise medicine First Class

Clinical experience - 4 week Orthopaedic and Rheumatology placement 2009
Laboratory experience - 6 months working in Queen Mary (University of London) Cell and tissue laboratory 2010

Interests
Muscular injury
Rehabilitation techniques after muscle injury

Extracurricular Activities/hobbies:
St Barts & the Royal London Hospitals Rowing Club Position held: Boat club captain 2007-08 05-present
Jazzwire Band Position held: Founder and drummer 06-present
East London Boats punting business Position held: Sole owner and proprietor 09-present

Dr Otto Chan
Consultant Radiologist
The London Independent Hospital
07973 676407 – mobile

zaideotto@blueyonder.co.uk

Personal Details :
- Married
- 7 children

Specialist Interests :
- Sports Medicine – MR, CT, US and Fluoroscopy & MSK intervention
- Trauma / ER / CT / MR / US / Fluoroscopy
- Cooking
- House renovation
- Travel
Adrian Conner
22.07.85
12 Louisa Street, London, E1 4NF
Telephone: 07852266660
Email: ha04392@qmul.ac.uk

Qualifications: GCSE (2001) 12 subjects A*-B
AS Level (2002) Physics (B)
A Levels (2003) Chemistry (A), Biology (A), Geography (B), Gen Studies (B)

Key Skills IT and Communication Skills Level 3 (2003)

Degree (2009) Upper Second Honours, Sports and Exercise Medicine BSc, Barts and the Royal London, Queen Mary School of Medicine.

Other qualifications
WABBA Gym Instructor Certificate (2002)
National Pool Lifeguard Qualification (2002)
Barts City Life Savers Certificate (2005)

Current Status: Final year medical student, Barts and The London Medical School, MBBS. – 2004 - to date.
Currently continuing research into ethnicity specific cardiovascular risk factors in British South Asian and White male adolescents having gained funding from Bart and the London Trust

Special Study Modules
1a – Essay: Can Deodorant Use Increase the Risk of Breast Cancer
1b – Physiotherapy in Amputees
2a – Dissection: Anatomy of the Thorax and Abdomen
2b – Mechanisms of Insulin Resistance
3a – Type II Diabetes Mellitus and Insulin Resistance in an Obese Patient
3b – Workbook Assignment
4 – Drugs in Sport: Cheating in the Tour de France

The Chase Sports Centre (2003-2004), Southend: Gym Instructor and class instructor
Ski Louise (Jan 2004-March 2004), Lake Louise, Canada: Ski Instructor and ‘Ski Friends’ Tour Guide
Financial Services Authority (March 2004-September 2004), London: High Street Firms Authorisation Team
Cyclone Couriers (June 2006-September 2008), London: Bicycle Courier
Queen Mary University Dyslexia and Disabilities (Jan 2008-Current): Note Scribe for disabled students

Achievements and Hobbies
Academic: Publications:
Vaginismus: A Review. Journal of O&G India 2007; 13 (234)

Audits:
Has LBC reduced rates of inappropriate smears?
Habitual physical activity and exercise in pregnant women of East London
Cycling: Organised Madrid to Barcelona and Lands End to John O’Groats rides Ride for Charity
Football: Captained University 1st XI and twice won the United Hospitals Cup
Organised fundraising through SBLHFC for charities Hope for Children and the British Heart Foundation
Play for UH representative team
Ironman UK: Currently training for second Ironman Triathlon in Western Australian

Referees: Mr Paul Barratt, Association of British Insurers (Previously of FSA)
51 Gresham Street, London EC2V 7HQ. Paul.Barratt@abi.org.uk
Mr Dilip Visthanathan, Consultant Obstetrics and Gynaecology
Whipps Cross Hospital, London E11 1NR. dilip.visthanathan@whippsx.nhs.uk
Dr. Mark Curtin BSc. MB BS MRCGP MFSEM(UK)

Date of birth 5th September 1966
Address 36 Illingworth Way, Enfield, Middlesex EN1 2PA
Telephone 0208 482 0542
e-mail doctormarkcurtin@yahoo.co.uk
Status Married
Nationality British
GMC registration 3482986
MPS Membership 180768

Education
St. George's College, Weybridge, Surrey: 10 O'Levels, 3 A' Levels
University College Hospital Medical School 1984-1990
• Intercalated BSc. In Neuroanatomy (class 2:1) 1987
• MB BS 1990

Post Graduate Qualifications
• Joint Certificate of Completion of Post Graduate Training in General Practice 1996
• Diploma of Faculty of Family Planning 1996
• REMO Certificate (Resus & emergency medicine on-field) 2004
• RCGP certificate of cardiopulmonary resuscitation and automated external defibrillation 2007 & 2008
• Rugby Football Union/Premier Rugby Pitch Side Immediate Trauma Care Course Certificate 2007,2008 & 2009
• Member of the Faculty of Sport and Exercise medicine (UK) 2007
• UK Sport 100% ME accredited anti-doping tutor 2007
• Membership of the Royal College of General Practitioners (MRCGP)

Current Posts
September 2007 - Present
General Practice Retainer, Warden Lodge Surgery, Cheshunt, Herts.

Experience
March 2007 - January 2010 • Medical Officer, Saracens RFC.
May 1995 - January 2006 • Medical Officer Tottenham Hotspur Football Club, London N17
May 1996 - January 1998 • General Practitioner Southbury Surgery, Enfield Middlesex
March 1994 - March 1995 • Senior House Officer, Obstetrics and Gynaecology, The Royal Free Hospital, Hampstead.
February 1993 - February 1994 • Senior House Officer, Paediatrics and Neonatology, The Whittington Hospital, Archway.
August 1992 - February 1993 • Senior House Officer, Psychiatry of Old Age & Medicine for the Elderly, St. Clement's & The Mile End Hospitals, Whitechapel.
February 1992 - August 1992 • Senior House Officer, Accident & Emergency, Chase Farm Hospital, Enfield, Middx.
August 1990 - August 1991 • Pre registration House Officer, Friarage Hospital, Northallerton, N. Yorks.
Orsett Hospital, Essex.

Awards & Invited Lectures
• City & East MAAG Annual GP Registrar Audit Prize 1995-1996
• Watford General Hospital Postgraduate Centre, January 2006 – Lecture: Men's Health
• Anti-doping Workshop, Saracens RFC 2007

Relevant Documentation
Clean Full Drivers Licence since 1992
Criminal Records Bureau –Enhanced Criminal Records Certificate 2005
Hepatitis B Immune Certificate 2007
Professional Development

- Attendance at the annual F.A conference of sports medicine 1995-2004
- Attendance at bi-annual ‘Doctors in Premiership Football’ meeting
- London Deanery Minor Surgery course 2004
- Treatment of Tendinopathy Lecture -Prof. Alfredson, 2007
- MSc module (Sport and Exercise Medicine) Injection Therapy 2008
- RFU Rugby Medical Conference 2007 & 2008
- Training day for RCGP Cert in management of drug misuse 2008
- Practice based & Chase Farm Hospital based Child Protection Workshops2008
- Practice based audit and significant event analysis completed 2008
- Currently undertaking an MSc in Sport & Exercise Medicine at Queen Mary College, University of London (Masters dissertation submitted July 2010, completion date September 2010)
- RCGP 2 day course in Minor Surgery September 2009

Interests

Playing Tennis, Cinema, Foreign Travel, collecting medical and sporting antiques and prints.
I am a keen spectator at a wide range of sporting events including Cricket, Association and Rugby Football.
I gained full colours in Hockey whilst at UCL Medical School.

Referees

Dr Peter Aron  
Callowland Surgery,  
141a Leavesden Rd,  
Watford, Herts  
WD24 5DG  
Mr John Alexander  
Club Secretary  
Manchester United Football Club,  
Old Trafford,  
MR16 0RA

Peter Dacombe MSc MRCS (eng)

I have set my focus on training as an Orthopaedic Surgeon with an interest in Sports Injury Treatment and have taken every possible opportunity to build a competitive portfolio in order to achieve this goal.

I took a year out between my two years of foundation training to complete a MSc in Sport and Exercise Medicine. This involved working with some of the top Sports Medicine and Sports Injury Surgery practitioners in the country, exposure to the practise of Sports Medicine in an elite setting and an opportunity to undertake research with the England and Wales Cricket Board, an international sporting governing body. I also took the opportunity to work as an anatomy demonstrator and a teaching fellow in the Queen’s Medical Centre Orthopaedic Department.

I am a member of the British Association of Sports and Exercise Medicine and am in the process of becoming an associate member of the British Orthopaedic Sports Trauma Association. I have a keen interest in developing an academic career.

I am dedicated to surgery and have endeavoured to develop my clinical skills by completing the basic surgical skills, advanced trauma life support. I passed my MRCS examination in my foundation year two to allow me to focus on research and developing practical skills during my surgical training.

I am enthusiastic about a career in orthopaedics and intend on advancing my academic portfolio alongside my clinical training by undertaking a research degree before my Certificate of Completion of Training.
Suzan de Jonge

Suzan de Jonge graduated from Leiden University in 2009, where she studied Medicine. Directly after her graduation, she started as a Clinical Research trainee and a registrar in Sports Medicine, and is currently working on her PhD-project in the field of Achilles tendinopathy.

This project is supervised by Professor Weinans from the department of Orthopaedics at the Erasmus MC in Rotterdam, the Netherlands, and Dr Tol from the department of Sports Medicine at the The Hague Medical Center Antonishouse in Leidschendam, the Netherlands. She performs her research at both institutes.

Her current research interests are Platelet-Rich Plasma therapy in tendinopathy and imaging techniques used in Achilles tendons. During the annual conference of Netherlands Association for Sports Medicine in November 2009, she received second prize for best abstract.

At the moment, she supervises two medical students for their scientific training. She gives lectures for medical students about tendon degeneration and this year, she will be tutor of third year medical students, during a minor called “Orthopaedic sports injuries”.

In 2012 she will start the clinical training Sports Medicine at the Medical Center The Hague in Leidschendam, the Netherlands.

Matteo Denti, M.D.

He attended at the University of Modena and then at the University of Milan where he degreeed in 1980. He completed his Orthopaedic Residency at the Istituto Ortopedico Matteo Rota in Bergamo and at the 2rd Orthopaedic Dpt. Of the University of Milan, San Gerardo Hospital Monza and degreeed in Orthopaedic in 1985.

From December 1985 to May 1996 he served as an assistant and then Vice-Chairman at the 2nd Orthopaedic Dpt. of the University of Milan, San Gerardo Hospital, Monza with special interest in knee and shoulder surgery and arthroscopy. From May 1996 to September 2000 Chief of the Arthroscopic Unit at the Orthopaedic Dpt. of the University of Milan, San Gerardo Hospital, Monza.

From September 2000 Chief of the Sports Traumatology and Arthroscopic Surgery Unit at the Galeazzi Institute, Milan

From January 2007 orthopaedic surgeon at the Galeazzi Institute, Milan (I) and at the Cliniche Luganesi, Lugano (CH)

From 1988 Professor for Teaching at the University of Milan in knee and shoulder surgery at the Orthopaedic Medical School.

In 1986 Award from the Italian Orthopaedic and Traumatology Society for a fellowship in U.S.A. for knee surgery.

In 1986: Award from the North Italian Orthopaedic Society for a fellowship in the U.S.A. for knee surgery.

In 1989 he won the ESKA-AOSSM travelling fellowship.

In 2006 selected godfather for the ESSKA-APOA travelling fellowship

Dr. Denti specializes in disorders of the shoulder and knee, including those treated with open and arthroscopic surgery.

Dr. Denti is author of 124 scientific papers published in Italian and international orthopaedic journals.

Dr. Denti has lectured more than 200 scientific papers at medical congresses in Europe and U.S.A.

He has also served as the orthopaedic consultant for the Italian Ski Federation, Asystel Milan Volleyball Team (1st Legue), Oregon Cantù Basketball Team (1st League) and Como Football Team (1st League).

Dr. Denti organized several scientific congress and meetings including the national meeting of the Italian Arthroscopy Society (1997) and the ACL Study Group Meeting (2004)

Dr. Denti’s professional appointments include:

• Clinical Professor, University of Milano Bicocca
• Board of Editors: “Arthroscopia e Ginocchio” and “Techniques in knee surgery”
• Consultant Reviewer: “Clinical Orthopaedics” and “Knee Surgery Sports Traumatology Arthroscopy”

Dr. Denti is a member of the following societies and associations:

• American Orthopaedic Society for Sports Medicine (AOSSM): Honorary Member
• Herodicus Society
• ACL Study Group
• European Society of Sports Traumatology Knee Surgery and Arthroscopy (ESSKA): Member of the Board: Educational Secretary
• SIOT: Italian Society of Orthopaedic and Traumatology
• SIGASCOT: Italian Society for knee, arthroscopy, sports traumatology, cartilage and orthopaedic techniques: Elected Vice President
Dr. Michel Baron D'Hooghe
(*08-12-1945)
Langerei 71 B-8000 Brugge

tel.: home : 050/33 66 11
AZ Sint-Jan : 050/45 29 02
fax: home : 050/33 97 50
AZ Sint-Jan : 050/45 29 05
e-mail : michel.dhooghe@skynet.be

Personalia
- Married to Anne Marie Van Acker (*01-04-1947)
- 5 grand-children : Helena and Hannah De Vos, Margaux, Estée and Alix D’Hooghe

Profession
- Doctor - specialist rehabilitation and physical medicine
- Head of the Rehabilitation and Sports Medicine Department AZ Sint-Jan Bruges.
- Since 1988 : Member of the Executive Committee of FIFA - President of the Medical Committee of FIFA (1988) and UEFA (2006)
- since 2004 : Honorary Consul of Mexico
- President of the Casa Hogar – Mexico
- Extra ordinary lecturer at the University of Gent (R.U.G)
- 2000 : receives the title of Baron
- Member of the World Cup Organising Committee
- President of Euro 2000
- Vice - President of the Women's Football Committee (FIFA)
- Vice – President of the Media Committee (UEFA)
Assoc. prof. Evgeniya Dimitrova, PT, PhD
Address: 6 Mara Belcheva Street, 1220 Sofia, Bulgaria
e-mail: janydim@yahoo.com
Telephone: 0035988 8352451

Work Experience
1988 – 2010 National Sports Academy, Department of Kinesitherapy, Sofia, Bulgaria
Assoc. Professor from March 2004 – Head of Department of Theory and Methodology of Kinesitherapy
Physiotherapist – Department of Emergency Traumatology of Emergency Medical Institute “Pirogov”; Department of Emergency Surgery; Department of Physiotherapy

Education
1977 – 1981 National Sports Academy, Sofia, Bulgaria
• Bachelor of Physiotherapy
• Master of Physiotherapy – 1996
• PhD – 1999

Interests And Professional Activities
Physiotherapy in Orthopedics and Traumatology, Orthopedic Physical Assessment, Manual therapy
Developed Excellence in over 15 Physiotherapy training courses.
Publications – 3 textbooks, 6 book chapters, over 50 peer-reviewed manuscripts. A frequent research presenter at national, and international scientific meetings in Physiotherapy.

Editoral Boards:

Languages
Bulgarian, English, Russian

Professional Membership
WCPT
Bulgarian Association of Kinesitherapists and Rehabilitators
Bulgarian Scientific Association of Sport Medicine and Kinesitherapy
Bulgarian Confederation for Hand Surgery
Bulgarian Confederation for Traditional Medicine

Amandeep Dosanjh MA MBBS MRCGP
Principal at The Cedars Surgery Maidenhead with a keen interest in sports medicine and acupuncture. Having lived and worked in Slough, the health care needs of this diverse population shows clear evidence of the inverse care law, hence developing a purpose for my MSc project. Keen footballer and dancer throughout youth and university and now continues with local dance team
Daniel T. Eglinton, M.D.

EDUCATION
- Undergraduate degree with honors, Cum Laude, Varsity letterman
- University of New Mexico School of Medicine
- University of New Mexico flexible general surgery Internship and Orthopaedic Residency
- National Board Accreditation

POST GRADUATE
- Board Certified in Orthopaedics with multiple re-certifications oral and written
- Certification in ATLS (Instructor)
- BHR
- Computer Knees and hips (Brain lab)
- YAG Laser
- AO Certification Kyphoplasty
- Cadaver meniscal allograft
- Accelerated repair technique
- Numerous arthroscopy and total joint courses including, revisions with Dr. Paprosky, Pelvic trauma Tile Course
- Member (Fellow) of the American Board of Orthopaedic Surgery
- Member of the American Orthopaedic Society of Sports Medicine

CLINICAL
- 28 Years of private practice with teaching appointments at UNC, Chapel Hill, Wake Forest, PA Program, Advisor to local medical tech program community college

SOCIETIES
- North Carolian Orthopaedic Association
- Eastern Orthopaedic Association
- State and Local Medical Societies

POSITIONS
- Chief of Surgery
- Secretary Treasurer of Medical Staff
- Chief of Orthopaedics at Trauma Level II Hospital nationally recognized
- Board Member of Rehabilitation Hospital
- Board Member of American Red Cross
- Advisor Warren Wilson College

RESEARCH
- 17 years experience with PRP and 5 years with BMA (stem cell transplants)
- 2½ years into a 5 year study Prospective randomized longitudinal cohort study on stem cell transplants for osteoarthritis of the knee – 242 transplants done so far

GREATEST_ACHIEVEMENT
- 3 wonderful children and 2 grandchildren. All of my children with college degrees and advanced degrees, and still alive although significantly poorer.
Dr Bryan English FFSEM

Secretary Pam +441932596102
e-mail bryan.english@chelseafc.com

Personal notes
Worked within The NHS for 13 years with the last 6 of these as a Consultant in Orthopaedic/Musculoskeletal Medicine in Sheffield and Leeds.
Worked as CMO for Judo before moving to UK Athletics in 1997. Worked over 2 Olympiads with UKA going full time into Sports Medicine in 2000 for The Sydney Olympics. Following the Athens Olympics moved into professional football and worked as CMO for Chelsea FC since 1995 (looking after a medical team of 21 personnel).

Organisations / wider responsibilities
Previously
Chief Medical Officer UK Athletics
Chairman United Kingdom Association of Doctors In Sport
Board Member National Sports Medicine Institute
Vice president Osteopathic Sports Care Association
Chief Medical Officer Everest Marathon 1997

Presently
Chief Medical Director Chelsea Football Club
Chairman of The Premier League Doctors Group

Written work

Essence of practice
Responsible for the medical welfare of all the footballers at Chelsea Football Club (from Academy to First Team). The manage a diverse multidisciplinary medical team. The achieve excellence in the return to play of players sooner and safer (ie avoid recurrence of injury) than any other football team in Europe, by adopting an EB practice as well as challenging current trends in elite sports medicine.

Kostas Epaminontidis PT, Cert. MDT

Jonathan Daniel Fenn

EDUCATION

1992 - 1998  Holy Family Primary School, Benfleet

1998 - 2005  St. Thomas More High School for Boys, Westcliff

2005 - present  St Bartholomew's and The Royal London School of Medicine and Dentistry

ACADEMIC QUALIFICATIONS

GCSE:
- English Language  2003  A*
- English Literature  2003  A
- Maths  2003  A*
- Double Science  2003  A A
- Religious Education  2003  A*
- History  2003  A*
- French  2003  A
- German  2003  A*
- Statistics  2003  A*

A-LEVELS:
- History  2005  A
- Biology  2005  A
- Chemistry  2005  C
- General Studies  2005  A

AS-LEVELS:
- Maths  2005  B

MBBS:
- Year 1  2007  PASS
- Year 2  2008  MERIT
- Year 3  2009  MERIT

iBSC:
- Sports and Exercise Medicine  2010  2:1 (Hons)

ACHIEVEMENTS

Elected QMSU and BLSA Student Trustee, 2009/2010 and 2010/11

Head Boy of St Thomas More, Sept 2002 – July 2005

Blaker Prize for Outstanding Academic Achievement, 2005

CLINICAL EXPERIENCE

Event Wembley Medical Team

Emergency Department Assistant for the RLH
CVs

Professor Charles S B Galasko M.B.B.Ch, FRCS(Eng), FRCS(Ed), Ch.M, M.Sc.(Hon), F. Med. Sci, FCMSA(Hon), FFSEM(Ireland), FFSEM(UK)

• Emeritus Professor of Surgery, University of Manchester
• Inaugural President, Intercollegiate Faculty of Sport and Exercise Medicine(UK)
• President, British Orthopaedic Association (2000 – 2001)
• President, International Orthopaedic Research Society (1990-1993)
• Vice-President, Royal College of Surgeons of England (1999-2001)
• Chairman, Joint Committee on Surgical Training (UK & Ireland)(1997-2000)
• Consultant Orthopaedic Surgeon with special interest in spinal surgery, children’s Orthopaedics, trauma and sports injuries
• Chairman, Intercollegiate Academic Board of Sport and Exercise Medicine UK & Ireland (2002-2005)
• Chairman, Examining Board, Diploma of Sport and Exercise Medicine(UK & Ireland) (2002-2007)
• Chairman, Training Board, RCS.(1995-1999)
• Chairman, Hospital Recognition Committee, RCS. (1992-1995)
• Chairman, British Wrestling Association (1992-1996)
• Vice-President, British Wrestling Association (1996-2002)
• Medical Advisor, British Wrestling & English Olympic Association (1987-2002)
• Vice-Chairman, English Olympic Wrestling Association(1998-2001)
• Member British Olympic Association Medical Committee (1987-2002)
• Previously Doctor with British Olympic Team; Event Doctor, Commonwealth Games; Medical Commissioner, Commonwealth Games.

• Has organised medical supervision for World and European Championships.
• Member TUE Committee

Author or co-author and editor 8 books. Over 250 articles in peer-reviewed journals or book chapters. Total publications over 400. Over 850 lectures to International and National Meetings, Learned Societies and Hospitals in over 30 Countries . Member (past or present) 8 editorial boards, 10 grant giving or award bodies; referee to 24 grant giving bodies and 28 journals.

Jennifer Graham BSc (Hons) Physiotherapy, AACP, MCSP, ACPSM

I gained a BSc (Hons) Physiotherapy at Glasgow Caledonian University in 2004 and went on to work in various specialities at the Glasgow Royal Infirmary, including Orthopaedics and Musculoskeletal Outpatients. During this time, I also worked with the Scottish Football Association, Hamilton Academicals FC, Dumbarton FC academy teams and Glasgow Academicals Rugby team. The next two years were spent working with orthopaedic specialists, sports medicine doctors in private clinics in New Zealand and Australia.

During this time, I continued to be involved with both football and rugby – Wellington Maori rugby team and the Northern Tigers football academy.

Through attending courses (Acupuncture, Kinetic Control, Splinting), lectures, in-services, learning from peers, and other professionals, I keep up-to-date with the best evidence-based practice and use all my experience to give the most valuable treatment to my patients.

My continued interest in Sports medicine led me to undertake an MSc in Sports and Exercise Medicine. This has given me the opportunity to further develop my clinical skills, learn from specialists and delve further into research. My current employment is split between the London Independent Hospital, a private practice in Hampstead and a Gaelic football team.

I have always had a personal interest in sports; playing football and running from an early age. Since graduating as a Physiotherapist, my focus has been to work in sports medicine. I am eager to continue learning and want to help further develop the area of Sports medicine.
Simran Grewal
Contact address: 121 Willersley avenue, Sidcup, Kent DA159EG
Telephone: 07821215403 Email: ha06324@qmul.ac.uk
Current post: Fourth year Medical student at Barts and the London medical school
Qualifications: GCSE
Beths Grammar School 1998 – 2004
English Language A*
English Literature A*
History A*
Biology A*
Chemistry A*
Physics A
I.T A
French A
Mathematics A
R.E A*

A level
History A
English literature A
Biology A
Chemistry B
General studies A

MBBS
Barts and the London Medical school 2006-Present
MBBS Year 1: Pass with merit
MBBS Year 2: Pass with merit
MBBS Year 3: Pass with merit

iBSC HON
Sports and exercise Medicine 2:1

Conferences and publications: None
Christopher Griffin
D.O.B 17/08/1986

I am a hardworking, caring, motivated team player. I have achieved a wide range of GCSE’s and A-levels, during which I realised my interest and skill in psychology and human biology. I took a gap year following my A-levels where I worked as a technical officer within a chemotherapy unit and assisted in the production and preparation of chemotherapy medications for the Russells Hall Hospital, NHS. I moved from the West Midlands to Buckinghamshire for my medical training in 2005 where I began to study my MBBS at St Bartholomew’s Schools of Medicine and Dentistry. I had a successful first four years of medical school training and have developed a keen interest in psychiatry, sports, musculoskeletal and A&E medicine. Also, whilst studying I became involved in private tutoring in a range of GCSE and A-level subjects, which I thoroughly enjoy to the present day. I decided to intercalate on the Sports and Exercise medicine, QMUL, BSc course for 2009-2010. Through this intercalated year I have developed much knowledge and wider understanding in a variety areas, particularly in qualitative research methods, and a specific interest in virtual learning tools, inter-professional education and musculoskeletal teaching. I am currently seeking and working towards achieving a number of publications, and completing my final year of medical training.

Maria N. Hassapidou

Maria Hassapidou is a Professor of Nutrition in the department of Nutrition and Dietetics and the head of the school of Food Science and Nutrition of TEI, Thessaloniki, Greece.

She is the head of the sports nutrition laboratory of TEI.

She coordinates / participates as a scientist, in several research projects funded by EU, the research committee of TEI, the Greek Ministries of Health, Education, Research and Technology and food or pharmaceutical companies, in the areas of dietary assessment - nutritional evaluation, dietary treatment of obese patients, sports nutrition, and experimental nutrition.

She has published more than 100 scientific papers (referred papers in journals and conference proceedings) in the area. She is a reviewer in many European and International journals.

She is a member of several national and European associations, societies, and committees. She is a member of scientific committees of European research projects (Healthgrain: member of the NIN committee, Eurreca: president of the scientific committee).

She has been a member of the National Committee on Food and Nutrition Policy of the Greek Ministry of Health for 3 years. She is the general secretary of the Hellenic Medical association for the study of obesity and a member of the council of the Hellenic College of sports Medicine and of the Society of Atherosclerosis of Northern Greece.
Dr Steph Hemmings

Centre for Sports and Exercise Medicine
Email: Steph.Hemmings@thpct.nhs.uk

Steph’s research interests include the role of maturation in the development of physiological characteristics of elite young athletes. She has over five years experience in physiological testing of elite athletes for various National Governing Bodies of Sport, including the R.F.U., R.F.U.W., Great Britain and Ireland Rugby Football League, U.K. Athletics, and British Triathlon. Currently, she is investigating ethnicity and cardiovascular disease risk factors in young people in Tower Hamlets.

Higher Education
2009 - PGCAP, Queen Mary University London.
2000 - 2006 Loughborough University, Loughborough.
   PhD. Developmental Exercise Physiology (Institute of Youth Sport)
   ‘Physiological Characteristics of the Elite Adolescent Athlete: Effect of Age and Maturity’.
1999 - 2000 Loughborough University
   MSc. Exercise Physiology.
1996 - 1999 Loughborough University
   BSc. (Hons.) Physical Education and Sports Science (1st Class).

Publications

Emma Hind BSc (Hons) Physiotherapy, MCSP, HPC

Emma qualified from the University of Salford in 2006 with a BSc (Hons) in Physiotherapy. Since graduating Emma has taken on several roles in private practice around the north west of England and developed her skills in the musculoskeletal field. It was during this time that Emma helped to develop physiotherapy assessment workshops for horse riders. This involved undertaking mounted and dismounted assessments to identify riders’ restrictions, muscle imbalances and postural problems that may influence their own or their horse’s musculoskeletal problems.

Alongside her private practice work Emma spent time working with the medical team at Burnley Football club and helped to integrate a physiotherapy service into her local amateur rugby club. Emma was keen to expand on her understanding of sports medicine and made the move down to London in 2008 to commence the MSc in Sports and Exercise Medicine.

Having carried out a ski season in Chamonix, in France Emma is a keen snowboarder. Emma uses her experience and enthusiasm for snow sports in her currently role at Bodyfactor, a subsidiary of Snow&Rock, where she is involved in the treatment and rehabilitation of both amateur and elite level skiers and snowboarders.
CVs

**Luís Horta**

- MD by the Faculty of Medicine of the University of Lisbon in 1982, Specialisation in Rehabilitation Medicine and in Sports Medicine.
- Sports Medicine Director of Sports Institute of Portugal (1996-2003), with the responsibility of the organisation of the Fight against Doping in Portugal.
- Director of the WADA Anti-Doping Laboratory of Lisbon (2003-2009).
- President of Autoridade Antidopagem de Portugal, the Portuguese NADO, since 2009.
- Member of the Health, Research and Medical Committee of WADA (2004-2009).
- Chair of the Laboratory Accreditation Sub-Committee of WADA (2005-2009).
- Member of UEFA Anti-Doping Panel since 2006.
- Master of Science in Sports Medicine by the Faculty of Medicine of the University of Lisbon in 1994.
- PhD in Medicine by the Faculty of Medicine of the University of Porto in 2003.
- Invited Professor in the Physical Education and Sport Degree of Universidade Lusófona in Lisbon since 1993.

**Chatzifragkou Iliana**

Date of Birth: 12 October 1984
Place of Birth: Athens, Greece
E-mail: ilianachat@yahoo.gr

2. Studies
I. Essential Studies 2002
Graduation from 5th High School of Kallithea, Athens, Greece
2007 Graduation from Technological Educational Institute of Lamia, Greece-Department of Physiotherapy.
Grade of Bachelor: 7.00 (Very Good)

II. Postgraduate Studies
2009-2010 Attendance as postgraduate student in Manchester Metropolitan University, Manchester, UK

II. Foreign Languages
English Proficiency in English – University of Michigan (Level C2)

3. Professional Activity
4/2008 - 6/2008: Physiotherapist in physical therapy center in Athens

4. Scientific Activity
2007: Elaboration of degree thesis entitled «Epidemiological study of injuries in Greek taekwondo athletes-Research study».

5. Seminars / Courses
28/6/2008-1/7/2008: Course in Myofascial Trigger Point Therapy
27/9/2008: Seminar for Prevention and Post-therapeutic Rehabilitation of Musculoskeletal Injuries
17-18/1 & 31/1-1/2/2009: Seminar of Manual Lymph Drainage
26/6/2010-27/6/2010: Course in Medical Taping Concept

6. Conferences
1/5/2007-13/5/2007: Annual conference of the physiotherapy departments of Technological Education Institutes of Greece
Presentation of degree thesis entitled «Epidemiological study of injuries in Greek taekwondo athletes-Research study».

7. General activities
August 2004: Volunteer in Athens 2004 Olympic Games in taekwondo
May 2009: Volunteer in BT Paralympic World Cup in wheelchair basketball in Manchester, UK.
Tomide Isinkaye

I am currently a medical student in the 6th and final year of my degree. Having always been a keen sportsperson I pursued an interest in sports medicine by studying for an intercalated BSc in sport and exercise medicine at Queen Mary University of London. My student project on the effect of eccentric and concentric calf muscle training on Achilles tendon stiffness was presented at the BASEM annual conference (2009) and has also been accepted for publication.

Following this I arranged my medical school elective at the SEGAS clinic in Thessaloniki Greece under the supervision of Dr Nikos Malliaropoulos and Professor Nicola Maffulli. During this time I joined the medical team for the annual Olympus Marathon and also for the World Athletics Final which was being held in Thessaloniki.

I also joined the SEGAS team on a project looking at re-injuries following hamstring muscle strains in elite track and field athletes. This project was supported by the Wellcome Trust student elective prize and has subsequently been accepted for publication in the American Journal of Sports Medicine.

I still compete and train regularly in track and field athletics having previously represented Great Britain in triple jump as a junior club athlete and more recently placing 4th and 5th at national university and under-23 championships.

Outside of sport I enjoy reading historical biographies, learning about different countries and spending time with friends.

Arun Jangra

24 Canterbury Avenue, Slough, Berkshire, SL2 1EG
D.O.B: 29/12/1986
Mobile: 07983447142 E-mail: ha06238@qmul.ac.uk

Current Post

4th Year Medical Student

EDUCATION

2007 – present Bart’s and the London School of Medicine and Dentistry, Queen Mary University
BSc (Hons) Sports and Exercise Medicine: 2:1
Medicine (MBBS): Currently studying
1998-2005 Herschel Grammar School, Slough
A level: Biology (A), Chemistry (A), Physics (A), Maths (A)
GCSE: 10 A*- C’s

EMPLOYMENT HISTORY

Jul 2007-Aug 2008 Orange telecommunications, Slough (Post room assistant)
Worked in a team of 3 to provide fast and efficient mail service – liaised with delivery companies and mail recipients, delivered mail to office staff, organised mail for collection and prepared deliveries.

Apr 2006-Aug 2006 ICI Paints, Slough (Lab assistant)
Worked in a lab and office to carry out various tasks - assisted with matching colours for new paint products, aided supervisor in preparing presentations, kept lab safe and tidy and also discussed any potential problems concerning the lab with seniors.

Nov 2005-May 2006 Carpet Right, Slough (Sales advisor)
Acted within a team to – create relationships with customers and advised them about their carpet purchase, calculated in store quotes, maintained and contributed ideas towards the presentation of the store.

Aug 2005-Nov 2005 UGC Cinemas, Slough (Team member)
Worked in groups of 2-4 – verified cinema tickets, maintained presentation of cinema screens and acquired skills of cash handling while serving refreshments at the till.

INTERESTS

• Attend gym regularly, play for the Bart’s and the London squash team and play football occasionally.
• Lead research, as part of a student led charity (Skip), to find a potential project in India.
• During summer periods also volunteer to teach sports to special needs children.

REFERENCES

Available upon request
Sachin Jhingan
Contact number: 07877 571213
Email address: ha06249@qmul.ac.uk
Current post: 5th year medical student at Barts and The London School of Medicine and Dentistry
Qualifications:
• First Class BSc (Hons) Sports and Exercise Medicine
• Merits in Year 1, 2, 3 of MBBS.
Hobbies: I am a board member of the charity - The Hemraj Goyal Foundation and also hold the position of Youth Team Leader. I am currently running the charity’s first project, which is its launch charity ball in September.
Experiences: I have spent the last year (2009/10) studying Sports and Exercise Medicine including modules on Injuries and Medical Problems in Sport and Biomechanics and Rehabilitation. Whilst doing my dissertation I had the opportunity of working with an elite soccer team.

Antonia Kaltsatou, MSc
Place of birth: Thessaloniki, Greece
Nationality: Greek
Home Address: 22, Dim. Gounari str, Thessaloniki Greece
Current Position: PhD student in the department of Physical Education & Sport Science
Email Address: akaltsat@phed.auth.gr

STUDIES
Bachelor’s degree in Physical Education & Sport Science, Aristotle University of Thessaloniki (2003)
Master degree in Health and Human Performance, Department of Physical Education and Sport Science, Aristotle University of Thessaloniki (2008)

RESEARCH PROJECTS
Participation in the following projects:
• Harmonising the knowledge about biomedical side effects of doping (2007-2008)
• Educating parents of children with disabilities (2008)

RESEARCH INTERESTS
• Autonomic Nervous System activity in athletes
• Autonomic Nervous System activity in cardiovascular patients
• Cardiorespiratory adaptations in athletes
• Cardiorespiratory adaptations in cardiovascular patients
• Side-effects of doping substances
• Rehabilitation exercise programs in patients with chronic diseases
• Quality of life

SELECTED PUBLICATION
“Physical and psychological benefits of a 24-week traditional dance program in breast cancer survivors”
A Kaltsatou, D Mameletzi, S Douka
Journal of Bodywork & Movement Therapies (in press)
Marios Kambouris, PhD, FACMG
Medical & Molecular Genetics
Biotechnology Consultant, Zenican Biotechnology Consulting Limited

a. Associate professor, Department of Genetics, Yale University School of Medicine, CT, USA
marios.kambouris@yale.edu
mailto:marios@kambouris.info

SHORT CURRICULUM VITAE
Certified: American Board of Medical Genetics in Clinical Molecular Genetics and Ph.D. Medical Genetics [Certification #: 96091].

Post-Doctoral fellowships: Clinical Molecular Genetics and Clinical Genetics, Henry Ford Hospital (Detroit, MI, USA).
Ph.D: Medical & Molecular Genetics, Indiana University School of Medicine (Indianapolis, Indiana USA).
B.S.: Biochemistry & Molecular Biology, State University of New York (Buffalo, New York, USA)

Eighteen years post-doctoral experience & expertise in Genetics, Genomics & Biotechnology both in scientific planning and business development. Global alliances, venture capital recruiting, private investment fund raising.

Established DNA4U.com and Geno-Type Biotechnology in Greece both offering Predictive Genomics and DNA Diagnostic Services. Jointly responsible for the formulation of the scientific plan and for negotiating for the formation of a Genomics company on behalf of the Research Center of King Faisal Hospital (Riyadh, Saudi Arabia) with British Aerospace Systems (part of an offset program) and Merlin Ventures (a UK based Venture Capitalist Company).

In Clinical Genetics extensive experience, examining, diagnosing, risk assessing, counseling and managing patients with a multitude of genetic disorders, congenital malformations, dysmorphia & mental retardation in Genetics clinics, in-patient consultations, field clinics, Growth clinics (skeletal dysplasias & growth abnormalities) and Neurology clinics (neurogenetic disorders) at Henry Ford Hospital (Detroit, MI, USA), Children’s Hospital of Michigan (Detroit, MI, USA) and Riley Hospital for Children (Indianapolis, IN, USA). Also risk assessing and Genetic counseling for high-risk pregnancy patients (maternal age, family history of genetic disorders, teratogenic exposures, abnormal MSAFP, etc.) in Prenatal Diagnosis clinics at Indiana University and Wishard Memorial Hospitals (Indianapolis, IN, USA).

In DNA Diagnostics, established and directed the Molecular Genetics & DNA Diagnostics laboratory at King Faisal Hospital & Research Center for eight years (Riyadh, Saudi Arabia) with extensive experience establishing, performing & interpreting DNA diagnostic testing, assessing and signing clinical and prenatal cases for hereditary diseases.

Molecular Genetics research interest focused in mapping human disease genes and discovering novel pathogenic mutations in known genes. Involved in the localization and/or identification of more than ten novel human genes. In addition to mapping Mendelian disorders involved in utilization of populations with unique genetic characteristics for target gene discovery in polygenetic multi-factorial disorders (Type 2 Diabetes Mellitus, Cardiovascular diseases etc

Employment History:
Assistant Professor Adjunct, Department of Genetics, Yale University School of Medicine, New Haven, Connecticut, USA
Consultant, Biotechnology Services, Zenican Consulting Limited, Limassol Cyprus
Chief Scientific Officer & Founder, Geno-Type Biotechnology, Athens, Greece
Chief Scientific Officer, Synergene Biotechnology Group, Qormi, Malta
Director, Laboratory for Molecular Genetics & DNA Diagnostics, King Faisal Specialist Hospital & Research Center, Riyadh, Saudi Arabia
Rebecca Kandasamy
122 Chiltern Drive, Berrylands, Surbiton, Surrey, KT5 8LX   07792480270  rebecca_k87@hotmail.co.uk
Profile:
A highly motivated, reliable, hard-working and conscientious Sports & Exercise Medicine graduate and current medical student with a friendly, caring and positive approach to staff and patients. Seeking to combine academic achievements and utilize a wide range of skills within the field of Medicine.

Education & Qualifications:
- 2009-2010: Queen Mary University Of London BSc (Hons) in Sports & Exercise Medicine
- 2006- Present: Barts & The London School Of Medicine & Dentistry 4th year Medical Student
  3 A-Levels in -
  Maths (A)
  Biology (A)
  Chemistry (B)
  2 AS-Levels in -
  Geography (B)
  General Studies (C)
  10 GCSEs in –
  Maths (A*)       English Literature (A)
  Double Science (A* A*)   English Language (B)
  Geography (A*)   German (B)
  Music (A*)       Design Technology (B)
  Information Technology (A*)

Past & Present Work Experience:
I have had work experience placements in various hospitals, GPs, a pharmacy and a dental practice and have shadowed different professions. In addition I have volunteered in a primary school.

Interests:
I enjoy playing the piano and flute and have reached high grades on both instruments. I take part in netball and tennis, and am a motivated member of the local gym. I take interest in my culture, and have taken part in many charity events to raise money. In addition, I love travelling, and have also flown to India to help orphanages with their education.
Jean-François KAUX
jfkaux@chu.ulg.ac.be
Physical Medicine and Sports Traumatology Service
University Hospital of Liège
Avenue de l'Hôpital, B35
4000 Liège
Belgium
Tel: +32 4 366 84 73
Fax: +32 4 366 72 30
Medical Doctor (2005, University of Liège, Belgium)
Diploma of Sports Traumatology (2009, University of Paris 6, France)
Complementary Master in Physical Medicine (2010, University of Liège, Belgium)
Doctoral Thesis in Medical Sciences (in progress)

I am currently working in the University Hospital of Liège in the Physical Medicine and Sports Traumatology Service, where I am one of the reference doctors for the 1st League of Belgian Football (URBSFA) club “Standard de Liège”, the 1st National Division of Belgian Handball (LFH) club “H.C. Visé B.M.” and the French Speaking Belgian Athletic League (LBFA).

My main responsibility is to conduct fundamental and clinical research on treatments of tendinopathies (eccentric and platelet-rich plasma).

You may find my bibliography in open access on the following link
http://orbi.ulg.ac.be (type my name).

Mr J B King Frcs Ffsem (Uk)
Consultant Orthopaedic Surgeon
The London Independent Hospital, 1 Beaumont Square, Stepney Green, London, E1 4NL.
Telephone: 020 7780 2400 Fax: 020 7780 2401 Direct Telephone Line/Fax: 020 7790 4405

I was a Lecturer in Orthopaedic and Trauma Surgery to the St Bartholomew’s and the Royal London Hospital School of Medicine and a Dentistry, Queen Mary, University of London and Honorary Consultant in Orthopaedic and Trauma Surgery to the Royal London Hospital.

I am the Ex-Director, and Founder of The Academic Department of Sports Medicine, now the Centre for Sports and Exercise Medicine, QMUL.

Sometime Chairman and now Honorary Life Member of the British Association of Sports and Medicine.

I have been awarded the Sir Roger Bannister Medal for lifetime services to Sport and Exercise Medicine and an Honorary Fellowship of the Faculty of Sport and Exercise Medicine of the Royal Colleges and Medicine and Surgery of Ireland

I continue to publish on SEM and remain an active member of ISAKOS (International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Trauma) and ESSKA (European Society for Knee Surgery and Sports Trauma).

I am the Honorary President of ECOSEP the European College of Sport and Exercise Physicians.
Olga Kiritsi
Date/Place of Birth: 31-07-1972/ Thessaloniki, Greece
Current Status: Consultant radiologist
Degrees:
1. Degree and Msc in Biology
2. Medical degree Aristotelian University of Thessaloniki Greece
3. Specialty accreditation, since August 2009
Career summary:
2. February 2010 up to now, CR, Ippokratis, Kozani Greece
Educational Activity:
1. 5th ECOSEP 2010, Sports Rehab Course Lower Limp, Thessaloniki Greece.
Contributor to scientific or educational presentations such as:
2. «Sonographic evaluation of patellar tendon thickness in elite track and field athletes: preliminary study», 16th Annual Meeting ESSR, Lille, 2010
3. «Is intervertebral disc degeneration accelerated in elite track and field male athletes?», «Low back pain in elite track and field Greek athletes» 22nd ECR, Vienna 2010
4. «MRI findings and low back pain in early young teenagers», 16th Annual Meeting ESSR, Genoa, 2009
Contributor to Fulltext Articles:

John Kirwan
Date of Birth: 03/12/1982
Address: 54 Coill Clocha, Oranmore, Co. Galway, Ireland Tel: 087-1254999 Email: jfpkirwan@eircom.net
Qualifications
2009-Present University College Galway - Master of Science in Sport and Exercise Medicine
2007 University College Dublin - MBBchBAO (Honours)
Professional Experience
2007-2008 Waterford Regional Hospital - Medical and Surgical Intern in an acute hospital.
2008-Present University College Hospital Galway - Medical Senior House Officer working in numerous medical specialities including cardiology, respiratory medicine and endocrinology
Other Qualifications
2010 Certificate in Management of Pitch Side Emergencies
2009 Basic Life Support Certificate (Irish Heart Foundation)
2009 Advanced Cardiac Life Support Certificate (Irish Heart Foundation)
2008 Paediatric Advanced Life Support Certificate (Irish Heart Foundation)Research and Publications
2010-Present University College Galway Title: Observational Study into the level of knowledge/utilisation amongst Primary Care Physicians in Exercise Prescribing to Patients with established Coronary Artery Disease as compared to the European Society of Cardiology Guidelines 2009
Comment - Sport has always been to the fore and a central part of my life and what better way than to incorporate it as much as possible in my own professional life. One particular area of interest in sports medicine that I possess is that of the very topical area of health screening in not only professional but now amateur sporting activities. This is one of the reasons why a case like this is of particular interest to myself. I feel that with my ongoing professional medical training, especially in the area of cardiology and my ongoing studies in the area of sports medicine, I will be equipped in the future to role out comprehensive and competent health screening to athletes of all levels.
References - Available on Request
Dr Markus W. Laupheimer

Higher Education
University of Ulm Medical School, Ulm, Germany, 1995-2001
Ludwig-Maximilian-University Medical School, Munich, Germany, 2001-2002
Dr.med.(MD): magna cum laude: University of Ulm, 1999-2002
MBA (distinction) Bradford School of Management, UK, 2007 – 2009
JCTPGP: Bavaria, Germany 2009

A successful career working 8 years as medical doctor and a specialization in General Practice with an interest in Sports and Exercise Medicine. Having acquired a broad medical knowledge of all major fields in medicine. Received an MD with distinction from a well reputed German Medical School. Good knowledge of most developed healthcare systems due to experience of working within healthcare systems in the UK, Germany, Switzerland, Australia and the US. An MBA with distinction from leading UK Business School (Bradford School of Management) with an interest of innovation management and service development. I have also developed an interest in alternative medicines like acupuncture, chirotherapy, homeopathy and nutritional medicine, which I have found to be useful and unusual skills in hospital medicine and general practice.

Publications and Talks
Publications:
Comparison of Epicutaneous Patch-Testing with the Synovial T-cell Infiltration in Patients with Arthroplasty (European Journal of Orthopaedic Surgery and Traumatology, June 2004)
Massive Granulomatous Lesion After Late Loosening of a Cemented Titanium Femoral Component (Submitted to the J Arthroplasty)
Comparison of Two Different Operative Techniques in Treating Isolated Patellofemoral Arthritis. (Submitted to the European J Orthopedics)

Talks:
SIROT Meeting San Diego, USA, August 2002
DGO/DGT Meeting Berlin, Germany, September 2002
International Knee Symposium, Augsburg, Germany

Goran Leko, Ph.D.

Associate Professor, Faculty of Kinesiology, University of Zagreb, Croatia. Contact: gleko@kif.hr

Education
• B.S. Faculty of Kinesiology, University of Zagreb, 1986.
• M.S Faculty of Kinesiology, University of Zagreb, 1994.
• Ph.D. Faculty of Kinesiology, University of Zagreb, 2001.

Research Specialties
• Swimming
• Fitness
• Human Performance Laboratory, Faculty of Kinesiology

Experience
• 1981 to 1991 - Head Coach „Zagreb Swimming school“
• 1995 to 2005 - Chairman, Zagreb Swimming Association
• 1998 to 2005 - Head of Human Performance Laboratory, Faculty of Kinesiology, Zagreb
• 2005 to 2009 - Kinesiology of sport department Head, Faculty of Kinesiology
• 2009 to Present - Department of Kinesiology of Sport Deputy Head, Faculty of Kinesiology, Zagreb
• 2006 to Present - Water Sports Chair Head, Faculty of Kinesiology, Zagreb

Recent Research Grants and Contracts
Training and incidence of illness / injury in swimming, Croatian Ministry of Science, education and Sport, 034-0342282-2401.
Ching Leung

Final year medical student
Sports & Exercise Medicine BSc (Hons)
Barts and The London, School of Medicine & Dentistry, Queen Mary University of London

Contact details: ha05168@qmul.ac.uk

Ching Leung, BSc, is currently studying as a final year medical student in Barts and The London. He joined the medical school in 2005. He obtained his Sports & Exercise Medicine BSc honours degree in 2010; he researched into the relationship between golf swing and low back pain, in professional and amateur golfers, and did a literature review on the use of EMG for golf-related low back pain. He has close relations with, and had shadowed Dr Wilson Li, a renowned Orthopaedic Consultant in Hong Kong. Ching has special interest in ACL reconstructive surgery, after he undergone the same operation in 2005. He reviewed the management of ACL injuries in 2008 as a self-selected module. He plays regularly for Barts and The London 1st Football Team, and had won the United Hospital Cup in 2008. He has had two years of clinical experiences in hospitals in the Barts and The London NHS Trust. He has shadowed numerous renowned consultants in East London from various different specialties.

Rusu Ligia

Professor of Trauma, Neurologic and Orthopaedice Rehabilitation, University of Craiova, Faculty of Physical Education, Sports and Kinesiology, Romania

Sport Medicine Physician, Sports Medicine Department of Emergency Hospital Craiova, Romania

Born- 24.02.1967
Married, 1 child

University education and postgraduate qualifications
- 1991, Diploma in Medicine, University of Medicine and Pharmacy, Craiova
- 1999, Diploma in Sports Medicine - Sports Medicine Physician Specialist, University of Medicine and Pharmacy Carol Davilea Bucharest
- 2000, Competence in General Echography, University of Medicine and Pharmacy Carol Davila Bucharest
- 2003, Ph.D. in Medicine Sciences- Anatomy and biomechanic, University of Medicine and Pharmacy, Craiova
- 2004, Sports Medicine Physician Primary, University of Medicine and Pharmacy Carol Davila Bucharest

Appointments
- 1991- 1995, General Doctor, Hospital Craiova
- 1995-1999, Residence in Sport Medicine, National Institute of Sports Medicine Bucharest
- 1995-2000, Assistant to University of Craiova
- 2000-2004, Lecturer of Trauma, Neurologic and Orthopedics Rehabilitation, University of Craiova
- 2004-2007, Assoc. prof. of Thrauma, Neurologic and Orthopedics Rehabilitation, University of Craiova
- 2007-present, Professor of Trauma, Neurologic and Orthopedics Rehabilitation, University of Craiova
- 2007-present, Sport Medicine Physician, Sports Medicine Department of Emergency Hospital, Craiova

Director of Research Centr for Study Human Body Motricity, University of Craiova.

Editor Managing “MEDICINA SPORTIVA” Journal of Romanian Sport Medicine Society
International reviewer in “Journal of Clinical Rehabilitative Tissue Engineering Research”, China

Publications
More than 150 studies and articles in journals on all aspects of Trauma and Orthopaedics, Neurology
Coordinators of 3 national research grants and coordinator from Romania in 3 international grants propose by European partners in FP7 program

Five books on aspects of anatomy, biomechanics, rehabilitation.

Special interests
Rehabilitation in sport trauma, orthopedics and neurology, orthtesis and prothesis.
CVs

Heinz Lohrer
Title: M.D. Honorary Professor (University of Freiburg)
Date of Birth: 09.08.1955
Place of Birth: Geisingen / Baden / Germany
Residence: Wachenheimerstr. 49m 65835 Liederbach, Germany
Address: Institute for Sports Medicine, Frankfurt am Main, Germany, Otto-Fleck-Schneise 10, 60528 Frankfurt
Tel: +49-69-678009-33 Fax:+49-69-678009-51 e-mail: Lohrer@sport.uni-frankfurt.de Lohrer@smi-frankfurt.de

School-Education
Until 1975 Finished with German Abitur (Qualification for University entrance)

Education
1976-82 Study of Medical Science at the University of Freiburg/Germany
1981-82 Practical Year at Hospital of Donaueschingen/Germany
1982 Approval Medical Doctor 10.5.82
1982 Conferral of Doctor degree 8.12.82

Education for Medical specialist
1983-4/84 Surgical Department - Hospital Donaueschingen/Germany
5/84-2/87 Hospital for Sports Injuries – Lüdenscheid-Hellersen/Germany
3/87-12/88 Orthopaedic Department University Hospital Freiburg/Germany
1988 Approval Medical Specialist in Orthopaedic Surgery 10.11.88
2009 Appointed Honorary Professor (University of Freiburg i. Brsg., Germany)

Current positions
Jan. 1989 - Nov. 1995 Director of the Orthopaedic Department of the Institute for Sports Medicine, Frankfurt am Main, Germany
Since December 1995 Medical Director of the Institute for Sports Medicine Frankfurt/Germany
Since Jan. 1989 Medical Head of the Olympiastützpunkt (OSP) Frankfurt- Rhein-Main
Since 1991 Head Team physician of the German Gymnastics Federation
Since 1987 Team physician of the German Athletic Federation
Olympic team physician for the German Olympic Teams
1992 in Barcelona
1996 in Atlanta and
2000 in Sydney

Achievements in Sport
Multiple champion (Baden-Württemberg) in Decathlon, Shot put, discus throwing and pentathlon

Scientific work - See attached file

Awards
These scientific works have been awarded with the “GOTS Michael-Jäger-Preis”:

Scientific activities
• Member of Scientific board „Orthopädie Schuhtechnik“ (OST)
• Vice President: Verbandsärzte Deutschland e.V. (1995 - 2000)
• Member of Board of the “Münchner Bildungsstätte für Orthopädischschuhtechnik“ (MBO)
• Member of Board of the “Gesellschaft für Orthopädisch-Traumatologische Sportmedizin (GOTS) 1994-2000
• International Associate Editor: Foot Ankle Int
• Editorial Advisory Board Member in: “The Open Orthopaedics Journal”
• Reviewer for:
  • Sportverletzung Sportschaden (SV-SS)
  • International Journal of Sports Medicine
  • Foot Ankle Int
  • British Journal of Sports Medicine
  • American Journal of Case Reports
  • Clinical Orthopaedics and Related Research
  • Current Orthopaedic Practice
  • The Open Orthopaedics Journal
**Professor Nicola Maffulli**

Nicola Maffulli received his basic medical degree from the University of Napoli Medical School, Italy, in 1983. In 1985, Nicola moved to the UK where he undertook the classical training that a young budding surgeon underwent at that time. After completing his Senior Registrar training, Nicola went to Hong Kong as a Lecturer in Trauma and Orthopaedic Surgery. A six month stint became longer and longer, and he was appointed an Associate Professor in 1995. In Mid 1996, Nicola was back in Aberdeen as a Senior Lecturer in Orthopaedics. In 2001, he moved to Keele University as the Professor of Trauma and Orthopaedic Surgery. There, he established an extremely productive research programme, and in December 2008 returned to London as the Centre Lead and Professor of Sports and Exercise Medicine. Nicola has been the President of the British Orthopaedic Sports Trauma Association, and sits on many committees in Sports Medicine and in Trauma and Orthopaedics. He is an Editorial Board Member of some 10 Sports Medicine and Trauma and Orthopaedic Journals.

Prof Maffulli’s recent research thrust has been in the genetics of orthopaedic conditions, in tissue engineering of tendons, and mesenchimal stem cell therapy for tendinopathy. He performs clinical research on tendinopathy, and has carried out many randomized controlled trials in musculo-skeletal medicine. During the years, Nicola has established a host of collaborations in the UK and abroad, and has lead multidisciplinary research teams in multicentre trials.

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**Dr. Nikos G. Malliaropoulos**

**EDUCATION**

- **Graduate:**
  - From the American College ANATOLIA of Thessaloniki (Year of ’75)
- **Doctor:**
  - Graduated from the Medical School, Aristotle University of Thessaloniki.
  - Sports Medical Physician:
  - Fellow of the Faculty of Sports and Exercise Medicine UK, F. FSEM (UK)
  - Master of Science (MSc) in Sports & Exercise Medicine –Medical School University of London Queen Mary-Mile End Hospital.
  - Diploma in Sports & Exercise Medicine (DSM) Medical School University of London -London Hospital.
  - PhD from Medical School of Aristotle University of Thessaloniki.
  - Credential of the McKenzie method.

**WORKING EXPERIENCE**

- Director of the Sports injuries clinic of Track and Field Association in Thessaloniki.
- Chief Medical Officer of the Hellenic Olympic Team XXVIII Olympics Athens 2004
- Director of the Medical Services of the Team European Bruno Jouli Games 2006
- Director of the Medical Services of the First South Eastern European Games 2007
- Director of the Medical Services World Final Gran Proux IAAF Thessaloniki 2009
- Chair of the European College of Sports Medicine and Exercise Physicians-ECOSEP

**FELLOW AND MEMBER**

- Founding member of the Greek Sports Medicine Association
- Founding member of the European College of Sports & Exercise Physicians.
- Member of the British Sports and Exercise medicine Association
- M.F.SEM Member Faculty of Sports and Exercise Medicine Royal College of Surgeons Ireland
- Fellow of the International Federation of Sports Medicine FIMS
- Member of the Greek Trauma Association

**SPORTS PARTICIPATION - JUDO**

- Member of the National Greek Judo team
- Balkan Champion in Judo – 5th DAN
- Technical Director Aris Thessaloniki Judo Club since 1999
- BJA Instructor Award 2010 (BJA IA 390)
- EJU Advanced Judo Coach

E mail contact@sportsmed.gr
Daniel Martínez Silván
Degree in Physiotherapy (University of Salamanca- Spain, and University of Kuopio- Finland).

Head of Physiotherapy Department, Clínica Traumatológica. Valladolid, Spain.
Head of Physiotherapy and high-performance department, BM Naturhouse La Rioja Handball Team.
Physiotherapist of RFEA (Spanish Royal Athletics Federation). Responsible for the National Sprint and Relay team.

Member of SETRADE (Spanish Society of Sports Medicine).
Member of Spanish Professional College of Physiotherapists. Collegiate No.CL47-1067.

Branka Matković
Address(es) ŠENOINA 27
Telephone(s) 00385 98 729 847
Fax(es) 00385 1 49 3031
E-mail(s), Web address(s) bmatkovic@kif.hr
Nationality(-ies) Croatian
Date of birth 30.05.1953.
Identification number from Records of Scientific Workers 99976

WORK EXPERIENCE
• Dates (from – to) 1979 -
Name and address of employer FACULTY OF KINESIOLOGY UNIVERSITY OF ZAGREB
Type of business or sector PROFESSOR
Occupation or position held PROFESSOR
Main activities and responsibilities RESEARCH and TEACHING IN SPORT AND EXERCISE PHYSIOLOGY

EDUCATION
Date 1979.
Place of education ZAGREB
Name and type of organisation providing education MEDICAL SCHOOL , UNIVERSITY OF ZAGREB
Title or qualification awarded MEDICAL DOCTOR

TRAINING
Year 1984.
Place of training ZAGREB
Name and type of organisation providing training MEDICAL SCHOOL , UNIVERSITY OF ZAGREB
Principal subjects/Occupational skills covered MASTER DEGREE IN MEDICINE
Year 1990.
Place of training ZAGREB
Name and type of organisation providing training MEDICAL SCHOOL , UNIVERSITY OF ZAGREB
Principal subjects/Occupational skills covered PhD IN MEDICINE

PERSONAL SKILLS AND COMPETENCIES
Mother tongue(s) CROATIAN
Other language(s) ENGLISH
Language Speaking ENGLISH,
Writing ENGLISH, ITALIAN,
Understanding (listening and reading) COMMUNICATIVE

SOCIAL SKILLS AND COMPETENCIES
GOOD ORGANISER

ORGANISATIONAL SKILLS AND COMPETENCIES
USE OF PC AND PC PROGRAMS

TECHNICAL SKILLS AND COMPETENCIES

DRIVING LICENCE(S) YES
Stephen May MA, FCSP, Dip MDT, MSc, PhD
Stephen May qualified as a physiotherapist in 1990, and worked for many years in a musculoskeletal outpatient setting in primary care in the NHS. He completed the Diploma programme in Mechanical Diagnosis and Therapy in 1995 and an MSc in Health Services Research and Technology Assessment in 1998. In 2002 he became a Senior Lecturer in Physiotherapy at Sheffield Hallam University, Sheffield, UK. He is the co-author, with Robin McKenzie, of The Human Extremities: Mechanical Diagnosis and Therapy (2000), The Lumbar Spine: Mechanical Diagnosis and Therapy (2nd edition, 2003), and The Cervical and Thoracic Spine: Mechanical Diagnosis and Therapy (2nd edition, 2006), several chapters in books, and over 20 publications in peer reviewed journals. He was awarded a Fellowship from the Chartered Society of Physiotherapists (UK) in 2006 for his contribution to the profession. He attained a PhD by previous publication entitled ‘Development of Aspects of Mechanical Diagnosis and Therapy’ in 2008.

Carolyn McMakin MA, DC
Carolyn McMakin, MA, DC is the clinical director of the Fibromyalgia and Myofascial Pain Clinic of Portland, Oregon. She developed Frequency Specific Microcurrent (FSM) in 1995 and began teaching FSM courses in 1997. In addition to maintaining a part time clinical practice, she teaches seminars on the use of FSM in the United States, Ireland and Europe. She has lectured at the National Institutes of Health and at medical conferences in the US, England, Ireland and Australia on the subjects of fibromyalgia and myofascial pain syndrome, fibromyalgia associated with cervical spine trauma and on the differential diagnosis and treatment of pain and pain syndromes and sports injuries. Her peer-reviewed publications include papers on the FSM induced changes in inflammatory cytokines and substance P seen with the treatment of fibromyalgia associated with spine trauma, treatment of pain in the head, neck and face, and low back caused by myofascial trigger points, delayed onset muscle soreness and shingles. She treats and consults with various NFL and MLB teams and players on the use of Frequency Specific Microcurrent in the treatment of sports injuries. Her text book, titled Frequency Specific Microcurrent in Pain Management, is in press with Elsevier to be released in 2010.

Maria Mitsiou
Ms Mitsiou Maria was born and lives in Thessaloniki. She is a M.Sc. student in Physical Education with the specialization of Special Education and Therapeutic Gymnastics. She has been cooperating since 2007 with the Laboratory of Developmental Medicine and Special Education, Department of Physical Education and Sport Science (DPESS), of the Aristotle University of Thessaloniki. Since 2009 she is an active member of the Greek Red Cross and a member of the Greek Association of Alzheimer Disease and Relative Disorders.
Umar Aziz Habib Mohammed BSc (Hons)
46 Harewood Road, Isleworth, Middlesex, TW7 5HL
Telephone No: 020-8560-6231 Mobile No: 07876786035 Email: mohammed_u33@hotmail.com/ ha05254@qmul.ac.uk

Objective:
I am a Final (5th) year medical student at Bart’s and the Royal London School of Medicine and Dentistry, Queen Mary University of London. I have worked in various hospitals around the North-East deanery (2005-2009) as well as Ashford (2003 - 2004) and West Middlesex (2005) hospital. I have gained a sound understanding of working in a medical environment. I work well both independently and when part of a wider team. I am reliable, diligent, punctual and enthusiastic.

Education:
Secondary School (1998-2005) - Isleworth and Syon School, Ridgeway Road, Isleworth, Middlesex TW7 5LJ
University (2005-2011)- Bart’s and the London School of Medicine and Dentistry, Garrod Building, Turner Street, Whitechapel, London E1 2AD
University (2009-2010)- Queen Mary University of London, Centre for Sports and Exercise Medicine, Mile End Hospital, Bancroft Road, London, E1 4DG

Qualifications:
GCSE- 8 A* 1 A 1 B
GNVQ- Information technology communication (Distinction)
A Level- Mathematics (A) Biology (A) Chemistry (A)
AS Level- Physics (A)
BSc (Hons) First class Honours- Sports and Exercise Medicine

Clinical Experience:
Newham: Respiratory medicine (Dr T. O’Shaughnessy)/ Colorectal surgery (Dr. Gonzalez)/ Obstetrics and Gynaecology (Mr N. Comi)
Royal London: Vascular surgery (Mr M. Walsh)/ Cardiology (Dr A. Webb)/ Accident and emergency (Dr G. Grier)/orthopaedics (Mr C. Natali)/ Dermatology
Mile End: Rheumatology (Dr B. Kidd)/ Sports and Exercise Medicine (Prof. N. Muffulli)
Whipps cross: Paediatrics (Dr. A. Gabr/ Dr J. Ho)
Goodmayes: Psychiatry (Dr R. Duffett)
Homerton: Neurology (Dr C. Liu)
St Bartholomew’s: Immunology (Dr P. Bright/ Dr Hilary Longhurst)

Work Experience:
Retail (2004)- Photo Place, Highstreet Hounslow
Gained an understanding of customer demand and the importance of customer satisfaction. Responsible for cashing up in the evenings.
Catering (2008)- Cellar society, Unit 4 Falcon park, London
Worked as a porter and bar attendant. Developed my ability to work under pressure and meet deadlines. Interaction with guests and staff enhanced my communication skills.

Publications:

Extra-curricular work:
RAG (raising and giving) Charity Fashion Show Member- All proceeds given to ‘The British Lung Foundation’.

Interests:
• Wu Shu Kwan or Chinese Kickboxing 1st degree black belt (Vice President of University Martial Arts society)
• Dancing- President of the university’s Dance Society.

References:
Dr Mohammed Adil Butt MRCP MBBS BSc (Hons)
SpR Gastroenterology, Queen Elizabeth the Queen Mother Hospital, Endoscopy Department, St Peters Road, Margate CT9 4AN 01843225544 x84629
Dr Simon Limb FRCP MBBS
Consultant Physician, Foundation Programme Director, Greenway Centre Dept of Medical Education, Newham General Hospital, Newham General Hospital, Plaistow, London E13 8SL
simon.limb@newhamhealth.nhs.uk/simon.limb@nhs.net
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Manijhe Mokhtari-Dizaji, Professor of Medical Physics
Faculty of Medical Sciences
Tarbiat Modares University (TMU)
Correspondence: Department of Medical physics
P O Box: 14115-331, Tehran, Iran
Tel: Office (+98 21) 82883893, Lab: (+98 21) 82883882
Fax: (+9821) 88006544
EDUCATIONAL RECORDS
Degree
B.Sc., Applied Physics (Solid States) 1987, Ferdosi University
M.Sc., Medical Physics 1991, TMU
Ph.D., Medical Physics 1998 , TMU
RESEARCH INTERESTS
1) In Vivo biomechanical behavior and elastic characteristics of lesions by ultrasound imaging:
   In this work several novel techniques were developed to accurately determine the biomechanical behavior and elastic
   characteristics of normal tissues and lesions by ultrasound images.
2) Study of dynamic arterial wall properties in major arteries: A way to detect atherosclerosis in the early stages of disease
   is to study the dynamic arterial wall properties in major arteries. Ultrasound image processing has been used in several
   studies to estimate the local wall biomechanical parameters of arteries.
3) Analysis of the forces and stresses developed in the wall of the left ventricular (LV), regional strain and strain rate:
4) Control the temperature increase and thermal damage dimensions during the laser or radiofrequency interstitial
    thermotherapy of the liver tumor
5) Estimation of the axial elastic modulus of ocular
6) Estimation of the elastic modulus of breast lesions: In our clinical trial, the techniques were used to successfully
   discriminate the normal breast tissue from lesions; fibroadenoma, ductal carcinoma, cyst, microcalcification and
   fibrocystic lesions; by looking at the estimated axial strain and axial elastic modulus of tissues with employ an external
   static stress to breast tissue in vivo.
7) Cancer ultrasonic targeted therapy

Dr Dylan Morrissey
Consultant Physiotherapist and Senior Clinical Lecturer
Centre for Sports and exercise medicine
Mile End Hospital, London E1 4DG
21 Driffield Road, Bow, London E3 5NE
dob 2nd August 1969
07941710273
mCSP 50968
HPC 43241
Overview
My overarching career objective as a clinical academic is to combine the best of educational, clinical and research practise
in order to develop and deliver high quality evidence based medicine for patients with musculoskeletal disorders. Over a
twenty year period, my activity in these three areas has progressed and I now hold a professionally unique combined
appointment as a Consultant Physiotherapist in Sports and musculoskeletal Physiotherapy and Senior Clinical lecturer in
Sports and exercise medicine (SEM). My key research theme is the link between movement and pathology, whether that link
serves as a diagnostic tool, treatment modality or outcome measure. To that end, I am the sole clinical consultant
in a department with 7-800 musculoskeletal referrals per month, co-manage a Human Performance laboratory and
direct an intercalated BSc in SEM. Over the last three years the balance of my work has become more academic, with
a corresponding acceleration in grant acquisition and paper publication. My medium term goal is to make best use of the
collaborations I have developed, both within and beyond Qmul, that underpin the one million pounds of research and
development funding I have secured. My long term goal is to deliver step changes in the understanding and management
of common musculoskeletal conditions
Dr. Stephen G Motto
London Bridge Hospital, St Olaf House, 2nd Floor, 27 Tooley Street, London SE1 2PR
Tel: 020 7403 0330

PRESENT APPOINTMENTS:

CLINICAL
Consultant in Sports & Musculoskeletal Medicine
London Bridge Hospital

ACADEMIC
Honorary Clinical Lecturer
Centre for Sports and Exercise Medicine
Queen Mary, University of London, London

QUALIFICATIONS:
* 2006 Fellowship of the Faculty of Sports & Exercise Medicine, UK.
* 2002 Foundation Fellow of the Faculty of Sports & Exercise Medicine, Royal College of Surgeons & Royal College of Physicians, Ireland
* 1995 Diploma in Medical Acupuncture
* 1993 Diploma in Musculoskeletal Medicine
* 1989 Diploma in Sports Medicine (London) (Distinction)
* 1984 Degree in Medicine

EDUCATION:

1979 – 1984  Medical Degree Course Southampton University Medical School, Southampton, Hants

EXPERIENCE - CLINICAL

1997 – Present  Consultant in Sports and Musculoskeletal Medicine
SM Sports Medicine
London Bridge Hospital - St Olaf House, 2nd Floor
27 Tooley Street, London SE1 2PR

* Run my own sports medicine/musculoskeletal medicine practice. Seven sessions per week
* Regular teaching sessions held Monday & Wednesday afternoons for doctors on MSc Course in Sports & Exercise Medicine, Queen Mary, University of London. Ad hoc training for doctors on MSc Course in Sports & Exercise Medicine at UCL and on the Bath distance learning course
* Developed specific interests in shockwave therapy, electromagnetic therapy and neurostimulation (scenar/Inter X) techniques for osteochondral injuries/chronic musculoskeletal pain
* Organised monthly, well attended lunchtime Sports Medicine Journal clubs established since 2001
* Established a junior basketball club in a primary school during the summer term since 2006 as a way of promoting exercise for health

ACADEMIC

Present  Honorary Clinical Lecturer
1991 – April 2010  Past Clinical Tutor and External Examiner
The Centre for Sports & Exercise Medicine, Queen Mary, University of London.

* Lecturer and Past Examiner for the diploma/MSc courses in Sports Medicine and Physiotherapy
* Provide clinical training for doctors on the MSc course
* Supervised a number of research projects carried out by physiotherapists and doctors; the most recent one involving electromagnetic therapy in 2004
* Organised and assisted in research
* Honorary Clinical Lecturer in May 2010
Tanja Nauck

Title: M.A.  
Date of Birth: 25.09.1977  
Place of Birth: Frankfurt, Germany  
Residence: Schlehenweg 7, 60433 Frankfurt, Germany  
Address: Institute for Sports Medicine, Frankfurt am Main, Germany Otto-Fleck-Schneise 10, 60528 Frankfurt  
Phone: +4969678009-45  
e-mail: nauck@smi-frankfurt.de;

School-Education

Until 1997  General qualification for University entrance  

Education

1997 - 1999  Education to a management assistant in advertising and finished  
2000 - 2006  Study of Sport Science, Psychology and Sportsmedicine at the University of Frankfurt/Germany, finished with M.A.  
2006 - until now  PhD student at the university of Freiburg/ Brsg.

Current positions

Since 2004  Assistant for clinical research in orthopaedics and biomechanics; Institute for Sports Medicine, Frankfurt am Main, Germany

Achievements in Sport

Roller figure skating world champion in 2004 and 2005

Publications


Patrick O’Halloran

I am a final year medical student at the University of Birmingham. I completed an intercalated BSc in Sports and Exercise Medicine at Barts and the London SMD in 2009. I have also recently completed a clinical attachment in Sports Medicine with Amol Saxena in Palo Alto, California. I am a keen amateur dramatics enthusiast and Millwall fan. I am hoping to graduate and start work in the West Midlands in 2011 and will look to continue to develop my knowledge and interest in Sports and Exercise Medicine with a view to specialising in this area.
Foluso Oluwajana

I am final year medical student with a strong interest in sports and exercise medicine. Various student selected components and membership of the medical school sports medicine society have allowed my knowledge and enthusiasm to grow in this area.

In 2008/9 I achieved First Class Honours BSc in Sports and Exercise Medicine at Bart’s and The London School of Medicine and Dentistry. This opportunity was extremely beneficial both for my personal interest in the topic and for developing research skills.

My research paper, Exercise, Sports and Musculoskeletal Medicine in UK Medical School: a Survey has been presented at the 2010 International Sports Science and Medicine Conference in Newcastle.

In May 2010, I spent 4 weeks working with renowned sports surgeons and physicians at the Hospital for Special Surgery in Manhattan, New York. Being the best hospital in the USA for orthopaedics, known worldwide for excellent care provided, I was able to gain invaluable experience in several fields, including sports surgery, primary care sports medicine and physiatry.

I have also conducted an audit, Length of Time between Diagnosis and Treatment of Breast Cancer at Russell’s Hall Hospital: an Audit. It contributed to the data and eventually affect clinical practice at Russell’s Hall Hospital in Birmingham and also to develop my own skills further.

On finishing my medical degree in 2011, I look forward to incorporating more sports and exercise medicine into my career, both in a practical and research setting.

Dr Nat Padhiar BSc(Hons) MSc PhD FCPodS

London Independent Hospital, 1 Beaumont Square, London E1 4NL
Secretary: Mairin McGuinness.
Tel: 0208 504 4546
Email: nat.padhiar@virgin.net

Nat graduated in Podiatry from Chelsea School and pursued a career in Podiatric Sports Medicine and Podiatric Surgery.

In 1989 he was awarded a research based Master of Science degree with distinction. This research was supported by ARC grant and was titled ‘A prospective study to evaluate radiological and biomechanical changes following Hallux Valgus surgery’. In 1993 he became Fellow of the Surgical Faculty, College of Podiatrists. In 1999 he was awarded a Doctor of Philosophy degree in the field of Orthopaedics & Sports Medicine from St Bartholomew’s and the Royal London School of the Medicine and Dentistry, Queen Mary, London University. In 1997 he was given a Gold Award for his presentation at the Scientific Meeting of British Association of Sports & Exercise Medicine. The presentation was in the field of Chronic Exertional Compartment Syndrome, which was the basis of his PhD thesis.

In 1991 he was appointed Honorary Consultant Podiatrist in the Rheumatology Department at The Royal London Hospital. He is at present holding a dual Consultant Podiatric Surgeon post at The Royal London Hospital (BLT) in the Musculoskeletal & Surgical Directorate and, also at the Mile End Hospital (THPCT) in the Foot Health Department.

He is also an Honorary Senior Lecturer, Internal Examiner and Module Leader in the Centre for Sports & Exercise Medicine (CSEM), St Bartholomew’s and the Royal London School of the Medicine and Dentistry, Queen Mary, London University. In the last decade he has supervised over 60 research projects submitted by MSc students in SEM.

Nat holds membership of various surgical and SEM institutions and, most recently was made Honorary Member of the European College of Sport & Exercise Physicians.

Nat Padhiar is a keen sportsman continuing to play cricket, tennis and taking part in endurance sport (32 marathons & over 60 Half Marathons). He has represented Uganda School boys at cricket.

In his professional capacity he has been part of the medical team and has attended World Student Games (1991), Commonwealth Games (2002), Island Games (2003), Everest Marathon (1993,1995), Mongolian Sunrise to Sunset Marathon (2001-2003), Daily Telegraph/British Brain & Spine Foundation London Marathon Team (1999-2006) and London Triathlon (2005). He has been appointed as Expert Medical Volunteer and Clinical Lead for Podiatry for the London 2012 Olympic Games. He is not formally attached to any professional football clubs but, many clubs refer footballers to him at his private clinic at London Independent Hospital.
Dr. Sousana Papadopoulou
Dr. Sousana Papadopoulou, is a Nutritionist and Dietician, she took her bachelor degree from the Dept. of Human Nutrition and Dietetics, Technological Educational Institution of Thessaloniki, Greece. She is also a Physical Education Teacher and she graduated from the Dept. of Sports Science and Physical Education, Aristotle University of Thessaloniki, Greece. Her PhD thesis is on Human Nutrition and Sport Science, and she completed her PhD studies at the Dept. of Sports Science and Physical Education, Aristotle University of Thessaloniki, Greece. She gives lectures on Sports Nutrition at the Dept. of Human Nutrition and Dietetics at the Technological Educational Institution of Thessaloniki Greece. She is a scientific collaborator at the Dept. of Human Nutrition and Dietetics at the Technological Educational Institution of Thessaloniki Greece, since 2002. She was a former scientific collaborator at the Physical Education and Sports Science Dept. of the Aristotle University of Thessaloniki, Greece. She has 22 scientific publications and 85 citations. She has also 150 oral and poster presentations at national and international congresses. Finally she has won several awards for her scientific work on Human Nutrition and Sports Science. Additionally, she is a former athlete of gymnastics and of track and field (400m) and she has won national medals.

Agapi Papalada
• Physiotherapist, graduate of Technological Institution of Thessaloniki, Greece
• Head of Physiotherapy Department at Sports Injury Clinic S.E.G.A.S. Thessaloniki, Greece
• Head of Administration at Sports Injury Clinic S.E.G.A.S. Thessaloniki, Greece
• E.C.O.S.E.P. Associated member

Dr Antonis Papoutsidakis, MD , MSc, MFSEM (UK), MECOSEP, Orthopaedic Surgeon
Dr Papoutsidakis was born in Rethymno in 1971. From 1990 to 1996 he studied Medicine at University of Crete. After graduation he did his service as a house officer in Perama Health Center in Crete and then he started his specialty during his service in the War Navy as a Senior House Officer in General Surgery and Orthopaedics. After War Navy he continue his training at Rethymno's General Hospital and then he moved to the UK initially at Royal Bournemouth Hospital then at Poole General Hospital and finally at Worthing Southlands General Hospital. During his stay in the UK he did his Post Graduate Studies in Sports Medicine at Bath University. In 2001 he returned to Iraklio University Hospital and he completed his training in 2004. After completing his training he worked as a Specialist Registrar at Worthing Southlands Hospital. From 2005 he worked as an Orthopaedic Surgeon in Private Praxis in Rethymno with special interest in Sports Medicine and Knee Surgery. He is a member of many Orthopaedic and Sports Medicine Societies such as FSEM, ECOSEP, FIMS, ESSKA 2000 etc. He is married to Mrs Vivi Thomou, linguist, lecturer in Crete's University and they have two children; Nikos and Vasiliki.

Hercules Pehlivanidis
Graduated in 2009 after completing a 4 year BSc on Sport Rehabilitation and injury prevention at Middlesex University. Through placement was bond and dedicated for two years to a high level youth football club in the UK. Ever since I developed a great interested in corrective exercise, performance enhancement, rehabilitation and injury prevention for young athletes. Furthermore on placement was influenced by my mentor and developed on various osteopath soft tissue techniques to complementary my rehabilitation approach. My research on my final paper created great interest and advance rehabilitation and injury prevention modalities for the ankle joint. Further interest concerned development in the Human Movement Science and Performance Enhancement for basketball, football, skiing and snowboarding.

Recently joined SEGAS medical team at North of Greece for national track and field teams to assist in the rehabilitation and develop an injury prevention scheme for track sports.
CVs

Mark Perry

Higher Education
2005  PhD  Applied Physiology  King’s College London
1996  BSc (Hons): 1st  Physiotherapy  University of East London
1990  BEd (Hons): 2.1  Education  Manchester Polytechnic

Employment history since 2002
Jan 2008 - present  Research Supervisor  Queen Mary, University of London
Sep 2005 - Dec 2007  Post Doctoral Research Fellow  Curtin University, WA, Australia
Mar 2002 - Aug 2005  Doctoral student  King’s College London

Peer-reviewed publications in 2010

Personal achievements
EMS prize for Best Overall Student in Physiotherapy, University East London, 1996
1st British Masters Athletics Championships 400m 2007 (40-45 age group)
International Masters vest by selection (400m) GBR v France v Belgium, Tournai 2007
4th European Masters Athletics Championships 200m, 2004 (35-40 age group)

Dr. Sonja Pettersen

Staff Physician, Performance Enhancement Professionals

Sonja Pettersen is licensed in Arizona to practice primary care medicine specializing in natural therapeutics. She received her Doctor of Naturopathic Medicine from the National College of Naturopathic Medicine in Portland, OR in 1998 and completed a year of residency in 1999 at the same college.

Dr. Pettersen’s practice focuses on professional athletes, primarily American football, to ensure optimal performance by balancing all aspects of the unique concerns of athletes.

Dr. Pettersen’s practice exemplifies a holistic approach to patient care through a variety of modalities including Frequency Specific Microcurrent, European Drainage, clinical nutrition, botanical medicine, I.V. therapy, homeopathy, functional medicine, Ortho Bionomy and mind-body techniques. She is also a Certified Hypnotherapist and Neuro Linguistic Programming practitioner.

Dr. Pettersen received her Bachelor of Science in Kinesiology, Bachelor of Arts degree in French, and a diploma in Health and Fitness from Simon Fraser University in Vancouver, British Columbia. While completing her studies, she worked in the human physiology and human performance labs performing experiments in extreme conditions of hot, cold and hyperbaric pressure chamber. In the human performance lab the experiments focused on peak performance of athletes and helping injured people to regain function.

Dr. Pettersen has trained over 500 health-care practitioners in Frequency Specific Microcurrent, a revolutionary technique for healing damaged tissue through frequencies.
CVs

Michael J. Petrou
7, Giannitson Street; Flat 101; Nicosia, 2027; Cyprus
Phone: 00357 99635062 • FAX: 00357 22317173 • E-Mail: petrou.m@cytanet.com.cy

Education
Aristotle University of Thessaloniki  Thessaloniki, Greece
Medicine, M.D. 1986 - 1993 University of Sheffield, Sheffield, U.K.
Master in Sport Injury (Sport Medicine) 2004 - 2005

EMPLOYMENT
Cyprus Anti-Doping Authority Nicosia, Cyprus President 2009 - present
University of Nicosia, Nicosia, Cyprus, Lecturer 2009 - present
Medical Corps, Cypriot Army, Ministry of Defense, Nicosia, Cyprus, Major Medical Corps (MC) 1995 - 2008

OTHER POSITIONS
Advisory Group on Science, Anti-Doping Convention, Council of Europe. Chair 2006 – present
World Anti-Doping Agency Expert, List Committee 2009 – present
Other sportsmedicine positions Team Physician/Sportsmedicine Consultant 1999 – 2003

RESEARCH FIELDS AND TOPICS
• Anti-doping;
• Nutritional supplements;
• Sport injuries;
• Obesity; metabolic syndrome; etc

Dr Jo Price BSc, MBBS, MRCGP
I qualified from Barts and the London Medical School in 2001.
I first became interested in Sports Medicine when I spent part of my elective with Dr Ian Beasley at QMW in 1999.

I love all sports. I’m a huge football fan and have played for a local team for the last 10 years. I have represented my country.
(Well, I played against a Welsh team on tour and got to meet the town mayor.) I have assisted at West Ham reserve team games
and have recently qualified as a crowd doctor.

I’m currently working as a GP in Tower Hamlets, trying to interest my patients in the health benefits of exercise and activity.
I can see the Olympic stadium from my bedroom window and look forward to being part of the events in 2012.

Shimal Ravalia
Shimal Ravalia gained her BSc Honours Degree in Sports Therapy, Health and Fitness from the University of Kent, Medway in 2007. That very same year, Shimal decided to further her education and moved onto gaining an MSc Degree in Sports Rehabilitation which was received in 2009 at the University of Kent.

After completing her first degree in Sports Therapy, she started working as a Fitness Consultant for Fitness First in London Bridge for 2 years. This entailed performing health checks, teaching fitness classes and designing very individualised and specific exercise programs. Alongside working, she completed her Masters Degree. Upon completion of her Masters’ Degree, Shimal began working with Ballymore Ltd and is currently working as Personal Trainer and Fitness Coach and in addition she specialises in Sports Massage and teaching fitness classes.

Shimal endeavours to further her career into Sports Nutrition because she currently includes nutritional advice and current research when she designs individual health programs. Shimal will go on to pursuing a PhD in this field.
Dr Ann Redgrave
Name: Dr Ann Redgrave BSc, MB.BS, DO

Present Appointment:
1: MSc Student at Queen Mary’s University of London.
2: Medical Director of the Redgrave Clinic, Wharf Business Centre, Wharf Lane, Bourne End, Bucks, SL8 5RU.
3: Chief Medical Officer GB Rowing based at Redgrave & Pinsent Rowing Lake in Caversham.

Telephone Contact 07889 396242
Email address: ann@redgraveclinic.co.uk or ann.redgrave@gbrowingteam.org.uk

Qualifications:
1990 Diploma of Osteopathy, British School of Osteopathy
1984 MB BS Charing Cross Hospital Medical School, University of London
1981 BSc Basic Medical Sciences Charing Cross Hospital Medical School, UL.

Previous and Current Appointments:
1990 until present: Medical Director of the Redgrave Clinic. Founded in 1990 this private practice specialises in Musculoskeletal Medicine for both the sports elite and the general public.
1992 – 2001 Chief Medical Officer GB Rowing Team
2004 – Ongoing Medical Adviser to GB Rowing

Research Experience: Nil
Relevant Publications: None in last two years.

Professor Jim Richards
Professor of Biomechanics
Research lead for Allied Health Professions
School of Public Health and Clinical Sciences
University of Central Lancashire
Preston
UK


Jim Richards worked for 10 years as a senior lecturer at University of Salford, and has taught Biomechanics to Prosthetists/Orthotists, Podiatrist, Physiotherapists and Sports Therapists. Jim Richards was appointed Professor in Biomechanics in the Department of Allied Health Professions at University of Central Lancashire in 2004.

Professor Richards has conducted much work on clinical application of biomechanics. This includes the development of new assessment tools for chronic disease, conservative and surgical management of orthopaedic and neurological conditions, the development of evidence based approaches for improving clinical management and rehabilitation, and testing of medical devices. The focus of Professor Richard’s work is to encourage inter-professional research and to develop direct parallels with research to the ‘real world’ of allied health work.

Professor Richards has authored many research papers and written and edited a number of textbooks including Biomechanics in Clinic and Research (2008) and the forthcoming 5th edition of Whittle’s Gait Analysis. He has also contributed to Tidy’s Physiotherapy (2003, 2008, 2011) and the 10th edition of Mercer’s Orthopaedic Surgery (2010).
Jordi Surós Romagós

Dates Birth: 22 June 1976
Domicile: Passage Bandina Nº 10. (17310) Lloret Of Mar (Girona)
Tel. 657.537.046
Email: Jordisuros@sportcat.cat
Web: www.sportcat.cat

CURRENT SITUATION:
Medical management of the medical centre of sportive medicine Sportcat
Medical management of the Physiotherapy center, CESMAR LLAGOSTERA
Doctor of Emergency of the service of traumatology of the Blanes Hospital- Girona.

UNIVERSITY TITLES
Graduate in Medicine for the University of Lleida 2004
Doctor Specialist in Medicine of Physical Education and Sports medicine for University Barcelona-Hospital Clinic.
Master in sports Traumatology for University of Barcelona 2008.

WORKS RELATED WITH SPORTIVE MEDICINE
1999- sanitary services of volunteering to the Universiada (university olimpic games), Mallorca.
2004-2008 Doctor to External Queries of the Medicine Sportive Unite of the Blanes Hospital.
2005-2008 Doctor of the Spanish Federation of Basketball ACB of antidoping controls.
2006-2007 Doctor of the RCD Español (football team)
2007 - Nimes- (France)- Doctor of the Clio Renault Sweden team of Rallys.
2007-2008 Doctor of CAR (Centre of High Performance), St. Cugat (Barcelona).
Sreekanth Sakthibalan

060220769
Ha06196@qmul.ac.uk
07843826075
35 Marlands road, Clayhall, IG5 0JL
D.O.B - 08/07/1988

EDUCATION HISTORY
2006 - Present: Currently in my 4th year of study of Medicine at Barts And The London School of Medicine and Dentistry.
Exam results 1st year - Pass - average of 73%
Exam results 2nd year - Pass with merit
Exam results 3rd year – Pass with merit
BSc (Hons) degree in sports and exercise medicine after 3rd year of medicine – 1st class honours degree achieved

PUBLICATIONS AND POSTER PRESENTATIONS


SPORTS ACHIEVEMENTS
Awarded ‘Full Colours’ at Ilford Country High School (highest sporting achievement)

Karate: Currently 1st Kyu
- Gold medal in sparring at county level (2003)
- Bronze medal in kata at county level (2003)
- Assistant teacher for children

Taekwondo: Currently 2nd Kup
- Bronze medal in sparring (open category), World Championships - Birmingham 2007

WORK EXPERIENCE
Physiotherapy department at Holly House Hospital - 2008
Orthopaedic Consultant with a special interest in sports related injury - 2006
Dr. Elizabeth Hingley Sakura

A bright, confident doctor with excellent patient communication skills, aiming to specialise in paediatric sports medicine. Easily builds good relationships with colleagues to contribute to improvements in efficiency and quality of patient care.

CURRENT STUDY:
Masters Degree in Sports and Exercise Medicine (Part time: Sep 08-Sep10)
Queen Mary's University, London

Research project: ‘Physiology of cold water immersion: A comparison of cold water acclimatised and non-cold water acclimatised participants during static and dynamic immersions’

CURRENT MEDICAL WORK:
Paediatrics Specialist Trainee Year 1 Doctor, London Deanery:
• North Middlesex Hospital NHS Trust (Mar 10-Aug 10)
  Level 2 Neonatal Medicine/General Paediatrics

• Homerton University Hospital NHS Trust (Sep 10-Mar 10)
  Level 3 Neonatal Medicine

QUALIFICATIONS:
GMC (Full Registration) 2007-Present
Neonatal Life Support November 2009
Advance Paediatric Life Support November 2007
Advanced Adult Life Support January 2007

Imperial College MBBSc Medicine July 2006
BSc Immunobiology and Pathology (2.1) September 2004-August 2005

OTHER ACHIEVEMENTS:
• Catalina Channel: Successful solo crossing of the Catalina Channel, Los Angeles, USA. July 2009 (10hrs58mins).


• English Channel: Successful solo crossing of the English Channel, (11hours 8minutes) raising over £1000 for the Red Cross Children's Hospital, Cape Town, South Africa. July 2005.

REFEREE:
Dr. D. Morrissey, Cons. Physio. & Clinical Lecturer, Queen Marys University, London
CVs

Amr Salam
121 King Edwards Wharf, 25 Sheepcote Street, Birmingham, B16 8AB
aas596@bham.ac.uk · Home: 01473 711594, Mob: 07818 033416 · 8 May 1986 · British

EDUCATION
University of Birmingham, Edgbaston, Birmingham 2005 – Present
Medicine (MBChB), Year 4 completed; Ranking: Top Quartile
University of London (Barts and The London School of Medicine and Dentistry) 2009/10
BSc (Hons) Sports and Exercise Medicine; Class: 1st (Hons)

EMPLOYMENT
Health Care Assistant, Nuffield Hospital Ipswich Operating Theatres Summer 2007+2006;
Oct 2004 – May 2005

INTERESTS
Adhesive capsulitis
Cyclists Iliac syndrome
Qualitative research

SPORTS MEDICINE EXPERIENCE
2 weeks with Sports Doctor, Birmingham Royal Orthopaedic Hospital 2009
2 weeks with Orthopaedic Sports Knee Surgeon, Ipswich Nuffield Hospital 2009
1 week with Ipswich Town Football Club Academy Physiotherapist 2008

ADDITIONAL CLINICAL EXPERIENCE
5 week Vascular Surgery placement at Emory University Hospital (USA) 2009
4 week ENT placement at Birmingham Heartlands Hospital 2008
4 week Bariatric Surgery placement at Heartlands Hospital 2007
4 week Interventional Radiology placement at Russells Hall Hospital 2007

PUBLICATIONS

AUDITS
Review of criteria for IAM MRI requesting at Birmingham Heartlands Hospital ENT Department - Presented at Audit Meeting 2008

PRIZES
Barts and The London, Sports and Exercise Medicine Principal's Prize 2009/10 2010
For finishing top of the year
Winner of Birmingham University Annual Student Grand Round Competition 2008 UK National Final Med Student Case Presentation Prize Finalist 2008
BMJ Case Reports Fellowship 2008
**CVs**

**Professor Sanjay Sharma BSc (Hons), MD, FRCP (UK), FESC**

Professor Sharma qualified in the UK in 1989 and was appointed Consultant Cardiologist and Physician at University Hospital Lewisham and Honorary Senior Lecturer in cardiology at Kings College Hospital London in 2001. In 2006 he took up the post of Director of Heart Muscle Diseases at Kings College London and became Professor of Cardiology at St George’s University of London in 2009. He is medical director for Virgin London Marathon, Consultant cardiologist for the CRY sports cardiology clinic at St George’s Hospital, cardiologist for the English Institute of Sport, British Rugby League and the British Lawn Tennis association.

Dr Sharma’s interests include cardiovascular adaptation in athletes, sudden cardiac death in the young and heart muscle diseases for which he has an international reputation and has published over 100 scientific articles including original papers in highly rated peer reviewed journals. Dr Sharma was recently awarded the status of Fellow of the European Society of Cardiology and elected as a nucleus member of the Sport Cardiology section of the European Association of Cardiovascular Disease Prevention and Rehabilitation in 2008.

Dr Sharma is an expert committee member of the National Service Framework chapter entitled sudden death and arrhythmias and is the cardiology representative on the RCP Sports and Exercise Medicine Committee. Dr Sharma leads the CRY screening programme, which is the largest of its kind in the UK. Dr Sharma has an active interest in medical education and is the lead tutor for the International teaching faculty for the Royal College of physicians. He has 16 years of experience in teaching for the MRCP exam and has published several educational books in medicine and cardiology including the Self assessment colour review of cardiology and Rapid review of clinical medicine for the MRCP part 2.

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**Qasim Shoaib (BSc Hons), 5th year medical student.**

I grew up in Manchester where I attended Burnage High School. Subsequently I studied at Xaverian College and attained A-levels in Maths; Chemistry; Biology; and Physics. I am currently a medical student at Barts and the London School of Medicine and Dentistry. At medical school I developed an interest in the musculoskeletal system. An Intercalated degree in Sports and Exercise Medicine at Queen Mary’s School of Medicine and Dentistry, University of London, gave me the opportunity to diversify my medical and scientific knowledge and develop those skills expected from doctors.

Conducting a research project allowed me to gain experience in generating and questioning hypothesis and critically evaluating new concepts. Undertaking research has equipped me with skills that I can convey to my medical degree and any future projects that I may undertake as a future health professional.

Studying medicine has made me a well-rounded individual. I am a hard working, conscientious and a dedicated individual with good organisation, time-management and team-working skills. When faced with difficult and demanding situations I can produce successful results while instilling confidence in my colleagues. I am always keen to enhance my skills and eager to pursue my interests in sports medicine.

I am a keen sportsman and participate in many sporting activities. I was captain of the cricket team in high school. My experience in sports teams and team activities has helped me to develop methods of working effectively and efficiently both individually and as part of a team. Being elected head prefect at school and participating in mentoring schemes has taught me responsibility, the importance of confidentiality and developed presenting/coaching skills.
Ziali Sivardeen BMedSci, BM BS, AFRCS, MRCS, FRCS (Orth).

Contact Address: Dept of Orthopaedics, Homerton University Hospital, Homerton, E9 6SR.
Telephone: Mobile (07846) 459796 Office (0208) 510 7271

Nationality: British
Sex: Male
Married Status: Married
Registration: GMC FULL 4146070
MDU: 325406C

GENERAL EDUCATION:
Newcastle-Under-Lyme School
10 O’Levels (9As, 1B)
4 A’Levels (3As, 1B)

MEDICAL EDUCATION:
Nottingham University Medical School
B. Med. Sci (2nd Class Upper)
BM, BS.

CLINICAL EXPERIENCE;
Aug 1996 - Feb 1997 SHO In A&E, St James’ University Hospital, Leeds.
Aug 1999 - Feb 2000 SHO In Orthopaedic Surgery The Royal Orthopaedic Hospital, Birmingham and the Trauma Unit, The University Hospital,
Jun 2000 - Aug 2000 SpR (LAT) In Trauma, Leicester Royal Infirmary,
Aug 2000 - July 2001 SpR, Trauma & Orthopaedics, North-West Region, (Barrow)
July 2001 - Dec 2005 SpR, Trauma & Orthopaedics, West Midlands Region,
Jan 2006 - June 2006 Senior Arthroscopy Fellow, Birmingham
June 2006 - Dec 2006 Senior Shoulder and Elbow Fellow, Nottingham
Jan 2007 - Nov 2007 Senior Shoulder and Elbow Fellow, Sheffield
Aug 2008 - Consultant Trauma and Orthopaedics,
Homerton University Hospital

Postgraduate MRCS Pt I (April 1998)
Qualifications MRCS Pt II (Feb 1999)
AFRCS Pt II (Feb 1999)
FRCS (TR AND ORTH) (2005)

RESEARCH I am committed to producing quality research aimed at answering specific questions. I have set up the FIRST PROSPECTIVE RANDOMISED CONTROLLED STUDY comparing the 2 most popular surgical treatments for frozen shoulder, namely manipulation under anaesthesia and arthroscopic capsular release. The results of a non-randomised study looking at the same area has been awarded podium presentations at BESS, the BOA, SECEC, and the ICSES.
I am also involved in another prospective randomized controlled study comparing standard surgical treatment for tennis elbow with the use of the TOPAZ radiofrequency probe.

(4) “Post-Vasectomy Analysis : Call for a Uniform Evidence-Based Protocol” Sivardeen KAZ, Buddoo M. Ann R Coll Surg Engl 2001; 83; 177-9

Presentations I have presented my work at over 50 National/international meetings

INVITED LECTURER
I have regularly travelled abroad to give Instructional Talks at International Meetings to other Consultant Orthopaedic Surgeons.

EXTRACURRICULAR ACTIVITIES
Sport has played a major part in my life, especially rugby which I have played at County and University Level. Now I enjoy keeping fit, reading and spending time with my family.

Slavi Todorov Stanoev
Associated Professor, PhD and Wrestling coach in NSA - Sofia

Education - National Sport Academy/NSA/, Sofia
Scientific carrier:
1986 - Defense of his PhD study on the upgrading in methodology of preparation of junior wrestlers and working out Biomechanical and mathematical models of the menagement of the preparation of wrestlers. Mr. Stanoev receives the PhD degree in pedagogical sciences. Later he becomes an Associated Professor in NSA, Sofia.

Publications: 80 articles and 6 books on the theory and practice of the wrestling in Bulgaria, Germany, Romania and others.

Sport carrier:
National junior champion and medalist of Men National championships of free-style wrestling. Medalist of tournament “Siero Pelado”- Cuban, medalist of tournament in Rumania and others countrys.

Coaching carierer:
1982 - 1988 - Senior trainer of the junior free-style team of Bulgaria. During that period the wrestlers won 47 medals. Five juniors become European champions and 2 world champions. In 1985 the Bulgarian adolescent team won 4 championship titles in the World Adolescent Championship in USA.
1990 - Coach of the Peru national team - free and classical style. The team won 9 golden medals in South America Games.
2000 – 2002 - Prepared the Pakistan national wrestling team for SAF - Games, but because of the war in Afghanistan they were cancelled and I came back to Bulgaria
2004 – President and coach of wrestling club “NSA – 2004”
2007/2008 – Prepared the Canadian National Team for the Olympic Games in Beijing 2008
CVs

Elizabeth Sweeney
Address (home)
44 Heathfield road
Wavertree
Liverpool
L15 9HA

Address (term)
66 Roebuck road
Walkley
Sheffield
S6 3GQ

Email – mda05ers@sheffield.ac.uk
Telephone – 07900223005

Current post – Fifth year medical student, University of Sheffield.
Qualifications – First class BSc Hons, Sport and Exercise Medicine.
Student Work Experience – Attendance at several specialist sports injury orthopaedic clinics. Involvement with the medical team at the track and field Grand Prix in Sheffield 2007.

Nikolaos Syrmos Md,Msc,Phd
Born In Thessaloniki, Macedonia, Greece In 23-01-1976
Msc In Human Performance And Health, Aristoteleian University Of Thessaloniki ,2007
Msc In Physical Activity And Health, Aristoteleian University Of Thessaloniki(In Progess)
Phd IN endoscopic anatomy and neurosurgery Aristoteleian University of Thessaloniki, 2009
Various stages in Italy University of Verona, Verona, Italy
Catholic University of Rome, Rome, Italy

Dr Alex Tardioli
CV: Short paper presentation
Position: Foundation Year 2 doctor
MSc student, Queen Mary, University of London

A 2008 Medical graduate with deep interest in Sports & Exercise medicine. Having been accepted onto the Sports & Exercise medicine MSc course, this was a catalyst to furthering my education & undertaking research. With career aspirations in Trauma & Orthopaedic surgery, my particular interest includes acute sports injuries and novel surgical techniques. The postgraduate MSc course provided an opportunity to learn from experienced peers, research and present interesting cases and evaluate current evidence based practice.

Personal sporting interests lie in football, tennis, running & scuba diving.
ECOSEP is an opportunity to present my original research and discuss findings with the wider community. This will be my first conference presentation and wish to continue my commitment to Sports & Exercise Medicine for the duration of my career.
Daniela Tarnita

Professor of Biomechanics, Mechanisms Theory and Strength of Materials - Department of Applied Mechanics, University of Craiova, Romania

Born: 28th February, 1959

University education and qualifications

<table>
<thead>
<tr>
<th>Institution</th>
<th>Period</th>
<th>Obtained degree</th>
</tr>
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<tbody>
<tr>
<td>Fac.of Mechanics, Univ.of Craiova</td>
<td>1977-1982</td>
<td>Mechanical engineer diploma</td>
</tr>
<tr>
<td>Fac.of Economical Science, Univ.of Craiova</td>
<td>1990-1995</td>
<td>Economical informatics diploma</td>
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1996 PhD: Doctor Eng. In Mechanical Engineering, University of Craiova

Appointments

| University of Craiova                          | 1984-1991    | Assist. univ.                           |
| University of Craiova                          | 1991-1997    | Lecturer                               |
| University of Craiova                          | 1997-2001    | Conf. univ                              |
| University of Craiova                          | 2001-present | Prof. univ                              |

Languages: English, French

Professional Experience:

Harvard University, May-June 2009, Documentation-research;
Harvard University May-June 2008, Documentation-research;
Duisburg-Essen University, Nov. 2007, Documentation-research;
Duisburg-Essen University, May 2005, Visiting Professor;
Duisburg University (2004)-Socrates Mobility; Katolic University, Leuven, (2003) -Socrates Mobility; Thesaloniki University (2002)-Socrates Mobility

Member of:
- Romanian Association of Mechanism and Machine Theory;
- Romanian Society of Biomaterials;
- Romanian Society of Theoretic and Applied Mechanics;
- Robotics Society of Romania;

Experience in national/international research projects:
- Modular adaptive orthopaedic implants based on smart materials (2007-2010);
- The control and technological integration of the intelligent materials and structures (2006-2008);
- Parametrical CAD/CAE system for simulation and analysis of the mechanical and kinematical characteristics of the human knee (2004-2005);
- Reverse Engineering in Cognitive Recognition and Control Of Biomimetic Structures (2010-2011);
- The knowledge of Universe: from reality to mental models. Program: Global perspective in Science and Spirituality, Financed by John Templeton Foundation (2006-2009);

Research Fields:
- Biomechanics;
- Bionics;
- Numerical simulations, stress and deformations analysis for 3D virtual bones, soft tissue and complex joints using Finite Element Method;
- Intelligent materials and their applications in medical field and robotics;
- Design and optimization for orthopaedic implants.

Publications

More than 120 papers in conferences proceedings and in peer reviewed journals on different aspects of Biomechanics, Intelligent materials used in orthopedics, Composite materials, Mechanisms Theory, Five books -in the fields of Mechanisms, Strength of Materials and Composite structures.
Danut Nicolae Tarnita
Professor of anatomy and orthopedy, University of Medicine and Pharmacy of Craiova, Romania
Born: 07th June, 1955

University education and qualifications

<table>
<thead>
<tr>
<th>Institution</th>
<th>Period</th>
<th>Obtained degree</th>
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<tr>
<td>Fac. of Medicine, Univ.of Craiova</td>
<td>1977-1983</td>
<td>Doctor-medic diploma</td>
</tr>
<tr>
<td>1997</td>
<td></td>
<td>PhD: Doctor in Medicine, University Medicine and Pharmacy of Craiova</td>
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Appointments

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<th>Institution</th>
<th>Period</th>
<th>Obtained degree</th>
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<tr>
<td>University Medicine and Pharmacy of Craiova</td>
<td>1990-1999</td>
<td>Assist. univ.</td>
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<td>University Medicine and Pharmacy of Craiova</td>
<td>1999-2007</td>
<td>Lecturer</td>
</tr>
<tr>
<td>University Medicine and Pharmacy of Craiova</td>
<td>2007-prezent</td>
<td>Conf. univ</td>
</tr>
</tbody>
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Languages: English, French

Professional Experience:

- Harvard University, May-June 2009, Documentation-research;
- Harvard University May-June 2008, Documentation-research;
- Duisburg-Essen University, Nov. 2007, Documentation-research;
- Duisburg-Essen University, May 2005, Documentation-research;

Member of:
- Romanian Association of Anatomy;
- Romanian Society of Orthopedics and Traumatology;
- Association of Medics of Romania;

Experience in national/international research projects:
- Modular adaptive orthopaedic implants based on smart materials (2007-2010);
- The control and technological integration of the intelligent materials and structures (2006-2008);
- Parametrical CAD/CAE system for simulation and analysis of the mechanical and kinematical characteristics of the human knee (2004-2005);
- Reverse Engineering in Cognitive Recognition and Control Of Biomimetic Structures (2010-2011);

Research Fields: Orthopedics and traumatology;
- Biomechanics;
- Anatomy;
- Numerical simulations, stress and deformations analysis for 3D virtual bones, soft tissue and complex joints using Finite Element Method;
- Intelligent materials and their applications in medical field and robotics;
- Design and optimization for orthopaedic implants.

Publications: More than 80 papers in conferences proceedings and in peer reviewed journals on different aspects of Biomechanics, intelligent materials used in orthopedics, composite materials, five books - in the fields of orthopedic and traumatology, anatomy and biomechanics.
Georgios Tsikouris
Orthopedic Doctor - Specialized in Sports Medicine from the University of Nottingham U.K.

Born in 1963 and graduated from the school in Hymettus Attica First with an “Excellent” grade of 19 7/13 /20 in 1981.
Graduate of the Medical School of the Aristotelian University of Thessalonica - School of Military Medicine (SSAS), in 1987.
In 1988 served in 251 G.N.A. (Pathological - Surgical clinic).
He was transferred to the 120 P.E.A in Kalamata as supervising doctor of the unit, until October 1991. Intermediary (January 1989 - May 1989) he returned to 251 G.N.A., in order to attend courses of Military Air-Flight Medicine, and finally graduated the school of Military Air Medicine.
He attended the Rotation Programme of Oxford in Nuffield Orthopedic Center, in John Radcliffe Hospital, in Milton Keynes Hospital and in August 1995 in Nottingham (Queens Medical Center) and Kings Mill Hospital in Mansfield, where he stayed from 1995 until 1997.
In the QMC, while practicing Orthopaedics, he also acquired a postgraduate degree in Sports Medicine (1995 - 1997 (Prof. W.A. Wallace Professor in Orthopaedics Sports Medicine). He returned to Oxford in 1997 in order to continue the Rotation Programme in the John Radcliffe Hospitals.
August 1998 - February 1999, he was employed as the Director of the Orthopedic Clinic in Southend Hospital in London, he received further training in Shoulder and Elbow Unit at Queen Elizabeth in Saint John’s Wood London and in Wimbledon.
In March 1999 he returned in 251 G.N.A., as a Supervising Orthopedic where he remained up to June, when he was sent as a Vice Commissioner in the Battalion Sanitary at Kossobo, where he remained until April 2000 and simultaneously worked at the American and the English Hospital.
In May 2000, he returned to 251 G.N.A where he worked as an Orthopedic - Special Sports doctor of the National Olympic team of Lifting of Weights.
In the middle of 2002 he was transferred in the Supreme Council of Sports of Armed Forces and partially for a 9-month period, from 2002 until 2006, he received further practice as a surgeon in the Alps Upper Limb and Shoulder Surgery in Annecy of France (under the surveillance of Dr. Laurent Lafosse).
He returned to 251 G.N.A., where he remained until 2007.
From 2000 - 2005 and for a 2-month period, per year roughly, he served as a doctor in the Hospital for Special Surgery in New York, as a doctor (in the department of Athletic injuries under the surveillance of Dr David Attachek, the official doctor of the Yankies Baseball team, where he received further postgraduate practice.
From the 15th of July until the 21st of July 2009, he received further training in Surgical Endoscopic Methods of the Vertebral Column at the DISC (Dessert Intradiscal Spinal Clinic) located in Phoenix Arizona.
From the 22nd of July until the 30th of July 2009 he received further training in Arthroscopic Surgical Methods for the hip at the Steadmann - Hawkins Sports Injury Clinic.
From the 31st of July until the 3rd of August 2009 he received training in the Hospital for Special Surgery in the latest developments in the field of Arthroscopic Surgery of the knee, shoulder and elbow.
Presently he maintains a private orthopedic medical center in Kolonaki, while still being the Orthopedic Doctor of the National Team of Lifting of Weights, the doctor of the Volleyball team of Olympiacos (2008 – 2009 - 2010) as well as the doctor of the Basketball team of Olympiacos (2009 -2010).
2005 - 2006: Doctor of the National Team of Track (Doctor in charge of Track, at the Athletic center of Saint Kosmas)

HONOURS
During November 2004, in Berlin, he earned the 1st award at the Shoulder Expertise Academy where he was competing against 85 other European surgeons of the shoulder.
From 2003 is an Honorary Member of the Arthroscopic Company of Northern America, where only 2 Greeks possess the aforementioned credential.
For his action as a Vice Commissioner – Orthopedic Doctor in Kossobo, he received a congratulating epistle on behalf of the European Forces of NATO as well as the American Army.
He has 12 publications in foreign language scientific journals and 20 in Greek on the topic of Orthopedic - Sports medicine.
He has above 100 attendances in international conferences and teaching courses.
Konstantinos Tsitas MD, Msc.
tsitas@phed.auth.gr

Degrees:
1. Medical degree, medical school of Aristotle University of Thessaloniki
2. Msc in Aristotle university of Thessaloniki.

Present condition:
1. Resident in orthopedic surgery
2. Scientific associate in Sports Medicine Clinic of North Greece, SEGAS, Thessaloniki/Greece

Certified diplomas:
1. PHTLS
2. «5th ECOSEP Sports Rehabilitation Course » Sports Injury Clinic of North Greece, SEGAS, Thessaloniki/Greece, May 2010
3. ATLS (Advanced Trauma Life Support) American College of Surgeons
5. BLS-AED
7. 2nd interstate seminar in Sport medicine issues Thessaloniki, 2007-2008 (duration 9 months)

Field of interests:
1. Sports science and medicine
2. Orthopedics and traumatology in Sports
3. Mountaineering medicine

Member:
1. Sports medicine association of Greece
2. European College of Sports and Exercise Physicians E.C.O.S.E.P
3. Hellenic Rescue Team H.R.T
4. Mountaineering Association of Velventos

Language:
1. Greek (Native)
2. English (Proficiency)
3. Slovak (Beginner)
4. Polish (Beginner)
5. German (Beginner)
Dr Richard Twycross-Lewis PhD MInstP

Higher Education

<table>
<thead>
<tr>
<th>Year</th>
<th>Degree</th>
<th>Subject</th>
<th>Institution</th>
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<tr>
<td>2005</td>
<td>PhD</td>
<td>Medical Engineering</td>
<td>Queen Mary University of London</td>
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<tr>
<td>2000</td>
<td>MRes</td>
<td>Advanced Instrumentation Systems</td>
<td>University College London</td>
</tr>
<tr>
<td>1996</td>
<td>BSc (Hons): 2.1</td>
<td>Sport &amp; Exercise Science</td>
<td>London South Bank University</td>
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Employment history since 2002

<table>
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<tr>
<th>Year Range</th>
<th>Position</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 2008 - present</td>
<td>Research Supervisor</td>
<td>Queen Mary, University of London</td>
</tr>
<tr>
<td>Mar 2001 - Aug 2005</td>
<td>Doctoral student</td>
<td>Queen Mary, University of London</td>
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</table>

Peer-reviewed publications in 2010


Personal achievements
Represented GB at 7 European and 6 World Bench Press Championships
8 x British Bench Press Champion
Keen interest in travel and have travelled extensively around Europe, USA, China and Polynesia

Dinu Valentina

Sport Medicine Physician, Sports Medicine Department of Emergency Hospital Craiova
Medical Director of Sports Medicine Polyclinic, Craiova, Romania

Personal data: Born - 28.08.1958
1 child

University education and postgraduate qualifications
1983, Diploma in Medicine, University of Medicine and Pharmacy, Craiova;
1992, Diploma in Sports Medicine Sports - Medicine Physician Specialist, University of Medicine and Pharmacy Carol Davila, Bucharest;
1997, Sports Medicine Physician Primary, University of Medicine and Pharmacy Carol Davila, Bucharest;
2002, Competence in General Echography University of Medicine and Pharmacy, Craiova;
2004 – present, PhD student at the Department of Physiology, University of Medicine and Pharmacy, Craiova;
2007 – 2009, Master Studies - Health Units Management University of Medicine and Pharmacy, Craiova;

Appointments
1983 – 1989, General Doctor, Emergency Hospital Craiova;
1989 – 1992, Residence in Sports Medicine, National Institute of Sports Medicine, Bucharest;
1990 – present, Sports Medicine Physician, Sports Medicine Department of Emergency Hospital Craiova;
1999 – present, Medical Director of Sports Medicine Polyclinic, Craiova, Romania.

Publications
More than 30 studies and articles in journals on all aspects of Sports Medicine.

Special interests
Sports Medicine, Applied Physiology, Rehabilitation Medicine.
CVs

Javier Lopez Valle
C / Alacant N º 2, 1, CP 08 680 Castelldefels (Barcelona)  
Mobile Phone: 627559498, tel Fixed: 931182045  
Date of birth: 03/01/1971, E-mail: javallelo@yahoo.es

University Training:  
In my last year of PhD in Medicine (Department of Anatomy, UB). Currently I have completed two years of the DEA and I am in the design phase of the thesis.

Medical Specialist in Physical Education and Sport by the Hospital Clinic EMEFiE, UB.

Specialist in Physical Activity, Health and Sports Performance at the University of the Balearic Islands, with a grant from the European Social Fund and the Balearic Government (Directorate General of the Conselleria de Treball i Formació).

Graduate in Medicine and Surgery, University Rovira i Virgili.

Scientific Societies:
Member of Scientific Committee ECOSEP (European College of Sports Medicine and Exercise Physicians)  
Member of FEMEDE (Spanish Federation of Sports Medicine)  
Member of Section of Sports Medicine College of COMB.

Current work activity:  
• FC Barcelona Medical Services for the Roller Hockey team.  
• Professor of Sports Medicine School(UB), since the academic year 2004-2005.  
• Medical Services of the Olympic Center of Sant Cugat (CAR of Sant Cugat del Vallés) in the UAPE-CST.  
• Professor of Master of Sport’s Podiatry (UB) from the current 05-06.  
• Professor of the Master RETAN, INEF Catalonia, 2009.

Laura Watson
Age: 22  
Address: Isnant, Glynne Road, Bangor, LL57 1AH.  
Email: wat_son@hotmail.co.uk  
Mobile contact: 07746123478

PERSONAL STATEMENT:
My research and applied interests are grounded within the field of sport psychology. Having previously undertaken a sport psychology degree and achieved a first class honors’, I am currently undertaking a MSc in Sport and Exercise Psychology and I am on course to pass with a distinction.

As a sport psychologist I have extensive experience of working with athletic cohorts, as since September 2009, I have undertaken a sport psychologist role within a local athletic club, providing both one on one consultancy meetings and conducting workshops with athletes and coaches of the club. In terms of my research portfolio, I wish to couple my consultancy role with research prospects and thus over the next 12 months I aim to have published both my undergraduate and postgraduate thesis and have plans to present both at BASES conference in April 2011.

A line to this, I am very interested in improving the health of the nation and as a result I have independently set up a female running club, as I want to use my knowledge and skills positively and apply them to promote well-being and increase exercise participation.

In addition, I have a high interest in mentoring, having previously undertaken an intermediate counselling course. This has been illustrated through my role as a mentor and student associate. My philosophy, both with mentoring and providing psychological skills support is to help individuals reach optimal performance in all aspects of life. My mission statement is “To positively influence those with whom I interact with, as part of my vocation”.

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CVs

Nick Webborn
Nick is currently Medical Director of The Sussex Centre for Sport and Exercise Medicine at The University of Brighton and Honorary Clinical Senior Lecturer in Sport & Exercise Medicine, Queen Mary, University of London. He is Chief Medical Officer to the British Paralympic Association. Nick has been Medical Officer with the GB Team at the Paralympic Games in Atlanta, Nagano and Sydney and has joined the International Paralympic Medical Commission and attended the Salt Lake, Athens and Torino Paralympics on the anti-doping committee and leads the sports injury surveillance programme. He was a member of the London 2012 health advisory group presenting to the IOC evaluation commission subsequently a member of the LOCOG SEM Advisory Group advising on the health care planning for the 2012 games.

Dr Jonathan Williams
Graduated MB.ChB. Bristol 1985
DCH, DRCOG, MRCGP
GP Principal Portishead Bristol since 1990 and GP Trainer from 1995.


UK Athletics Level 2 Endurance Coach.
Sports Medicine experience; doctor on 3 overseas marathon training camps.
UK Schools Games 2009 (fencing) and 2010 (hockey). Medic for Gordano Sharks RFC, cross-country races, aquathons and England FA.
Dr Jun Ming Zhang MBBS DFFP
Nationality: British
Mobile number: 0773 918 4948
Email: jmzhang888@yahoo.co.uk
Current occupation: Salaried GP

PROFESSIONAL QUALIFICATIONS
2007 DFFP
2007 GP PMETB
2002 MBBS London
Further training completed
Aug 2008 WOVD International classifier, Sitting volleyball

Professional sports qualifications
July 2009 Level 1 FIVB Volleyball Coach

SPORTS MEDICINE EXPERIENCE
Current sports medicine involvements
• Resident event doctor to East London Lynx Volleyball Club,
• Medical advisor and consultant for All Nations Tournament 2006-2010
• Team doctor and coordinator for Great Britain Men's Sitting Volleyball Team
• Volleyball England Classification advisor
• WOVD Classifier

Major events involvements
2007 Pappendal Sitting Volleyball Invitational Pappendal and Arnhem, Holland - Team doctor
2007 European Sitting Volleyball Championship Nyiregyhaza, Hungry GB - Men's Team doctor Trainee WOVD classifier
Cambodian Standing Volleyball World Cup
2007 Cambodia Trainee WOVD classifier UK representative
2008 Bei Jing Paralympic Games 2008 Beijing, China - IPC Guest & Observer

Eurocup 2008 Sitting volleyball, Nyiregyhaza, Hungary - WOVD classifier
2009 European Championships 2009 Elblag, Poland - WOVD Classifier Men's GB Team doctor
2010 Sitting Volleyball World Championships 2010 Edmunds, Oklahoma State, USA - Chief WOVD Classifier GB Team doctor

REFERENCES
Personal reference: Gary Beckford, Eas London Lynx Volleyball Club, 1 Carr Road, Walthamstow, London E17 5ER
Mobile: 07904 586 359 Email: gary@volleyfirst.co.uk

Work reference: Dr Jayesh Bhatt, Park Medical Centre, 57 Hawkstone Road, LondonSE16 2PE Tel: 0844 815 1145

Georgios Ziogas
Dr. Georgios G. Ziogas, was awarded a Master of Science degree (M.S.) from the Department of Physical Education at Pittsburg State University and a Doctoral degree (Ph.D.) in Exercise Physiology from the Department of Health and Exercise Science at the University of Missouri-Columbia. During his doctoral studies he was a teaching and research assistant at the Exercise Physiology and Human Performance Lab. He received numerous prestigious awards including the “Who’s Who Among Students in American Universities” (1994, 1995), the “Walter Scott Monroe Research Fellowship” (1993) and the Superior Graduate Student Achievement Award (1996).

Since 2000 he is the head of the “SPORTSCLINIC Thessaloniki” Exercise Physiology and Human Performance Lab in Greece and he is working with numerous elite athletes and teams from all over the country including: Olympiacos F.C (Champions League), PAOK F.C. (Uefa Cup), Aris Grigoriadis (Gold Medalist -Swimming World Championships), Vasilis Polymeros (Bronze Medalist in 2004 and Silver in 2008 Olympic Games), Mr. Dimitris Mougios (Silver Medalist - 2008 Olympics) and others.

In addition he is Research Assistant at the Orthopaedic Sports Medicine Center at University of Ioannina Medical Center and Clinical Exercise Physiologist at IASIS Aerospace Medical Center in Thessaloniki. He has many presentations at international conferences, and publications in reputable journals including Metabolism, Medicine and Science in Sports and Exercise, Journal of Cardiopulmonary Rehabilitation, Canadian Journal of Applied Physiology, Research Quarterly for Exercise and Sports, Nutrition, Journal of Strength and Conditioning Research, Knee Surgery Sport Traumatology and Arthroscopy, Journal of Science and Medicine in Sports etc.
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