



## **Dance medicine: the female athlete triad and hypermobility**

**Monday 20 April 2009**

# **Abstracts & Biographies**

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## **Dance medicine: the female athlete triad and hypermobility**

**Monday 20 April 2009**

**Dr John Scadding**

9.20 am **Welcome address**

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### **BIOGRAPHY**

Dr John Scadding is a consultant neurologist at the National Hospital for Neurology and Neurosurgery, Queen Square, and until 2003, was also on the staff of Whittington Hospital, London. He is Honorary Senior Lecturer at the Institute of Neurology. He is, or has been, honorary consultant neurologist to the Royal Navy, the Royal Air Force, the Royal Society of Musicians, and St Luke's Hospital for the Clergy. He was educated at University College London and UCH Medical School. He qualified in 1972 and trained in Neurology at UCH, the Royal Free Hospital and the National Hospital. A period of research into mechanisms of neuropathic pain at UCL and RFH led to a lasting clinical and research interest in the treatment of chronic neuropathic pain.

He was appointed consultant neurologist in 1982. Activities since then have included periods as Medical Director of the National Hospital in its final years as a Special Health Authority and during the formation of a combined Trust with UCLH, and subsequently as a Deputy Medical Director of the UCLH Trust.

His activities in medical education include several years as Clinical Sub-Dean at the Institute of Neurology in the 1980s, and visiting Professorships in Malaysia and Hong Kong. He is a member of one of the MRCP(UK) examining Boards, and from 2000 to 2004 was Chairman of the groups responsible for writing questions for the exam.

His publications include papers on basic and clinical aspects of neuropathic pain, contributions to general medical texts, and joint editorship of a

textbook of neurology. He has served on the editorial boards of several journals.

He was appointed Associate Dean of the Royal Society of Medicine in 2002, and Dean in 2006, and becomes Chairman of the RSM Press Board in the autumn of 2008.

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**Monday 20 April 2009**

**Ms Caroline Miller**

9.20 am **Welcome address**

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**BIOGRAPHY**

Caroline Miller is Director of Dance UK.

Dance UK is the national voice for dance, with over 1000 individual members and over 150 corporate members, ranging from Sadler's Wells and the Royal Ballet to local dance teachers, choreographers and professional dancers. On joining Dance UK Caroline worked to produce the Dance Manifesto in partnership with the National Campaign for the Arts, which was presented to David Lammy, the Minister for Culture in 2006 – a key priority identified in the Manifesto was the need for investment in dancers' healthcare. Before becoming Director of Dance UK, Caroline was an arts publicist for 14 years and held the positions of Head of Publicity at the international publishers Phaidon Press, press manager for Sadler's Wells and the Royal Festival Hall, and press officer for the ICA. She began her career as the marketing officer for Colchester Arts Centre.

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## **Dance medicine: the female athlete triad and hypermobility**

**Monday 20 April 2009**

**Mr Wayne McGregor**

9.25 am **What is expected from dancers?**

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### **BIOGRAPHY**

'Wayne McGregor's keen embrace of science and technology, of pop and cyber culture, has made him one of Britain's top-ranked choreographer...

With Wayne McGregor you never know where his insatiable curiosity will take him.' The Times

Wayne McGregor is a multi award-winning British choreographer, renowned for his physically testing choreography and ground-breaking collaborations across dance, film, music, visual art, technology and science. He is the Artistic Director of Wayne McGregor | Random Dance, Resident Company at Sadler's Wells Theatre in London; Resident Choreographer of The Royal Ballet (appointed 2006) and the UK government's first Youth Dance Champion (appointed 2008). McGregor is also a frequent creator of new work for La Scala, Milan, Paris Opera Ballet, Nederlands Dans Theatre, San Francisco Ballet, Stuttgart Ballet and English National Ballet; as well as movement director for theatre and film (including, Harry Potter and the Goblet of Fire). His production of Entity for Wayne McGregor | Random Dance is at Sadler's Wells, London, from June 4-6.

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**Dance medicine: the female athlete triad and hypermobility****Monday 20 April 2009****Ms Rachel Peppin****10.00 am The dancer's perspective**

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**BIOGRAPHY**

Rachel Peppin Parker enjoyed a rewarding 20 year career dancing with the Atlanta Ballet (1987-1992) and as Principal Dancer with the Birmingham Royal Ballet (1992-2005), where she danced many of the major classical roles, including Aurora in Sleeping Beauty and Juliet in Sir Kenneth Macmillan's Romeo and Juliet. In 2003, while still dancing, she investigated 'Osteoporosis and Related Health Issues in the Lives of Female Ballet Dancers' and was granted an MA from the University of Birmingham. She retired from dance in 2005 and re-trained as a Pilates Instructor. She is married to BRB's Principal, Robert Parker and has a daughter Olivia.

**ABSTRACT**

This session will discuss the pressures facing female ballet dancers and issues relating to the Female Athlete Triad. This will be discussed from the experiences and perspectives of a professional dancer's twenty year career in the ballet world, and from her research into Osteoporosis in female dancers for her MA thesis.

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## **Dance medicine: the female athlete triad and hypermobility**

**Monday 20 April 2009**

**Dr Roger Wolman**

10.35 am **Female athlete triad**

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### **BIOGRAPHY**

Dr Wolman was appointed to the Royal National Orthopaedic Hospital in 1994 as Consultant in Rheumatology and Sport & Exercise Medicine. Previously he had worked at the British Olympic Medical Centre where he completed an MD thesis on the Female Athlete Triad. This involved research on 25 professional dancers as well as runners and rowers. He has written several texts on Sports Injuries and has a particular interest in bone injuries, overuse injuries and soft tissue rheumatic disorders. He has worked with several Dance Companies and Schools including the Royal Ballet, Rambert Dance Company, Riverdance and Central School of Ballet. He runs an NHS Dance Medicine Clinic every week in central London.

### **ABSTRACT**

Although amenorrhoea in athletes was first described in the 1970's and osteoporosis in this group in the 80's, the syndrome of the Female Athlete Triad was only introduced in the early 90's. This refers to the triad of disordered eating, menstrual dysfunction and reduced bone mineral density.

Disordered eating specifically refers to low calorie (energy) intake relative to the energy expenditure of exercise. This energy imbalance is the cause of the syndrome and the key to implementing effective treatment. Reduced energy availability leads to changes in neuro-endocrine signalling in the brain with reduced activity of the gonadotrophin pulse generator in the hypothalamus.



This causes hypothalamic-induced menstrual dysfunction, the second part of the triad. There is a range of menstrual effects with impaired luteal phase at one end of the spectrum, anovulatory cycles in the middle and overt amenorrhoea at the other end.

Oestrogen production is reduced as part of the menstrual dysfunction and this, at least in part, is responsible for the third part of the triad, namely reduce bone mineral density. This may be mild but in some cases the effect can be severe with frank osteoporosis and associated insufficiency fracture.

There is also a very important fourth part to this syndrome, namely the increased risk of bone injury. This is commonly what first brings the dancer to the attention of the medical profession and will often convince them that a behavioural change (in terms of diet and exercise) is necessary.

Although the low bone density can be partly explained by the hypo-oestrogenaemia, this is not the complete answer. Studies have shown that oestrogen replacement therapy does not correct the osteopenia indicating that there are other hormonal factors at play. This may include reduced levels of IGF-1, Leptin and TSH and elevated levels of cortisol all of which have been described in this syndrome. Our understanding of the full hormonal implications of this syndrome is incomplete.

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## **Dance medicine: the female athlete triad and hypermobility**

**Monday 20 April 2009**

**Ms Emma Redding**

Chairing Session two: **Managing the female athlete triad**

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### **BIOGRAPHY**

Emma Redding is a dancer, dance educator and dance science researcher. She teaches contemporary dance technique at Laban; however her primary focus is on the leadership of the Dance Science Department at Laban and of the MSc Dance Science degree programme. Emma's research interests include interdisciplinary screening programmes, pedagogical considerations in the technique class and the physiological requirements of dance training and performance. Emma has published research in academic journals such as the *Journal of Dance Medicine and Science*, *Journal of Strength and Conditioning Research* and *Social Behaviour and Personality*. This last year, Emma was awarded two substantial research grants, amounting to over \$500k, to lead a three year investigation into talent development in dance among young people and a screening and profiling project for musicians and dancers. She is a reviewer for the *Journal of Dance Medicine and Science*, *Dance Research Journal* and for various UK Higher Education funding councils and trusts. She is also a member of the Board of Directors of the International Association for Dance Medicine and Science (IADMS).

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## **Dance medicine: the female athlete triad and hypermobility**

**Monday 20 April 2009**

**Dr Matt Wyon**

11.35 am **Modifying training**

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### **BIOGRAPHY**

Matthew Wyon is a Reader in Performance Sciences at the University of Wolverhampton, UK where he works in both the Sport and Dance Departments. At the University he is the course leader for the MSc in Dance Science and Director of Studies for 5 dance science and medicine doctoral candidates. He is on the Board of the International Association of Dance Medicine and Science and is the chair of their Research Committee and sits on the Medical Advisory Committee of Dance UK. He is a certified strength and conditioning specialist (NSCA) and is the exercise physiologist for the Birmingham Royal Ballet and English National Ballet. In 2007, the British Association of Sport and Exercise Science asked him to write the fitness testing guides for dancers. He has worked with numerous dancers and companies within the UK and Europe as an applied physiologist and fitness trainer.

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## **Dance medicine: the female athlete triad and hypermobility**

**Monday 20 April 2009**

**Dr Jonathan Katz**

12.10 pm **Psychological aspects**

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### **BIOGRAPHY**

Dr Jonathan Katz is currently a freelance Consultant Psychologist providing psychology support to elite able-bodied and disabled athletes. Jonathan was the Great Britain Head Quarters Psychologist for ParalympicsGB at the Athens 2004 and Beijing 2008 Summer Paralympic Games and lead Psychologist for the Turin 2006 Winter Paralympic Games. In addition, Jonathan has been the consultant psychologist to the British Paralympic Association as well as squad psychologist to the Tennis Foundation, the British Fencing Association, and the British Disabled Ski Team as well as being personal psychologist to a range individual athletes. Jonathan has also worked as part of a clinical psychology department in a psychiatric hospital in addition to the provision of sport psychology support. The support provision includes a range of psychological issues from performance sport psychology to clinical sport psychology. He provides support to all levels of the high performance environment from the individual athlete to organisational/management structures and communication systems within sporting organisations.

Jonathan's academic qualifications include BSc Psychology, MSc Social Psychology, Post-Graduate Diploma in Counselling Psychology (BPS) and a PhD in Applied Psychology. His professional affiliations include being Dual Chartered by the British Psychological Society (BPS) in Counselling Psychology and Sport and Exercise Psychology. Jonathan is accredited by the British Association of Sport and Exercise (BASES) and has BASES High Performance Sports Accreditation Status.

### **ABSTRACT**

This session will present psychological factors associated with eating disorders. It will then discuss an intervention framework demonstrating how these variables interact. The session will also provide some applied examples of managing eating disorders from the elite performance sport environment and will conclude with some suggested lessons to consider.

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**Dance medicine: the female athlete triad and hypermobility**

**Monday 20 April 2009**

**Ms Heather Walker**

12.45 pm **Towards a global approach to management**

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**BIOGRAPHY**

Heather trained at the Royal Ballet Senior School and joined the Royal Ballet Company in 1971. In 1985, she graduated from the Professional Dancers' Teaching Course at the Royal Academy of Dance and has been teaching for over 30 years, 15 of which have been in Higher Education.

She has worked with students of all ages and levels and professional dancers both in the UK and overseas and established a Ballet Department offering a 2 year course in an existing opera and music college in Tokyo. She was Rehearsal Director of Phoenix Dance Company for 2 years; Ballet Mistress for the Ballet de Santiago in Chile for 3 years and also of Euroballet in Luxembourg for a year; and Ballet Mistress and Acting Artistic Director for the Ballet Teresa Carreno in Venezuela for a short time.

Through her own experiences as a student and dancer, and her further observations as a teacher, she became interested in the impact of injury, and recognised the need for a programme not only to help educate young dancers but also to allow them to take greater control for their own welfare.

She is currently Student Co-ordinator with responsibility for pastoral care at the London Studio Centre and where she has been able to further refine and develop the "injury management programme". She has also come into contact with students dealing with a variety of other issues including that of "disordered eating". In these cases in particular, the impact is also felt by staff who feel unsure of how to deal with students perceived to be "at risk" and also by fellow students who express anxiety and uncertainty. It became clear that there was a need for a cohesive and appropriate policy to offer support and guidance to all relevant parties.

## **ABSTRACT**

Disordered eating has been present in the performing arts for a very long time and as indicated by the national press, there is growing awareness that it affects society on many levels, with incidences now rising rapidly in young males. It is an issue that can provoke widely varying emotions and responses, many of which stem from a fear of "getting it wrong", especially for teachers in full time vocational institutions working with vulnerable young people, in an area beyond their expertise.

The impacts – both physical and psychological, are well documented. The issues affect not only the sufferer but also fellow students and staff, and uncertainty and inconsistency can only compound the problems. This being the case seems to suggest that creating clear, well defined steps and goals may provide a "safer" environment in which to operate. A simple but clear policy, with guidelines for both students and staff can help identify boundaries for areas of responsibility and offer support.

The policy should be well informed through research and practice and clearly aimed at the best interests of those concerned. But once established, no matter how insubstantial it may appear, the policy can provide a base from which to start, and will further develop and refine through its application by individuals for individuals.

Knowing what needs to be done is much easier than doing what needs to be done. There is always so much more to learn. But if "doing" is delayed until everything can be learned, then it may already be too late. When dealing with such volatile and emotive issues, there are unlikely to be any firm guarantees of success, but doing nothing is really not an option.

## **REFERENCES**

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Dyke, MBE, Schilla (ed.) (2001) *Your Body Your Risk*, Dance UK, London

Welbourne, J (2000) Points to consider when establishing policies to cope with eating disorders in dance schools and companies. Healthier Dancer Conference 2000 – Moving Matters Conference Programme. Dance UK.

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## **Dance medicine: the female athlete triad and hypermobility**

**Monday 20 April 2009**

**Professor Rodney Grahame**

Chairing Session Three

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### **BIOGRAPHY**

Rodney Grahame started his professional life as a general practitioner in London in the early 60s, moving to train in Rheumatology under Eric Bywaters at the Hammersmith Hospital in 1965.

In 1969 he was appointed consultant rheumatologist at Guy's Hospital, a position he held until he 'retired' in 1997. At that time he was invited to UCH as emeritus professor and part/time consultant rheumatologist where he has run a hypermobility clinic (until recently with Alan Hakim, now with Hanna Kazkaz) ever since. Sister clinics for children and adolescents, in which he is involved, have opened at Great Ormond Street Hospital for Children and UCH respectively.

He is a past editor of 'Rheumatology' and has held the Presidency of the British Society for Rheumatology, The British League against Rheumatism (now renamed ARMA), and the Section of Rheumatology & Rehabilitation of the Royal Society of Medicine. From 1987-1995 he was Chairman of the Education and Publications Committee of the International League of Associations of Rheumatology (ILAR).

In 1990 the University of London conferred on him the title of Professor of Clinical Rheumatology. He has been elected to the fellowships of the Royal College of Physicians, the American College of Physicians, the British Society for Rheumatology and the Royal Society of Arts. From 1993 to 2003 he was Chairman of the Disability Living Allowance Advisory Board at the Department of Work & Pensions, appointed by the Secretary of State.

In 1998 he was awarded the CBE 'for services to Rheumatology and the Disability Living Allowance Advisory Board. He has also been honoured by



the national rheumatology societies of France, Russia and the Czech Republic. In 1996 he was appointed Chargé de Cours, Faculté de Médecine, Université de Nice. Since 2000 he has been an Honorary Physician to the British Association of Performing Arts Medicine. In 2004 he was appointed an Honorary Consultant in Paediatric Rheumatology at the Great Ormond Street Hospital for Children and Honorary Professor at University College London in the Department of Medicine. His research interests have in recent years have concentrated on inherent connective tissue disorders, joint hypermobility and Performing Arts Medicine.

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## **Dance medicine: the female athlete triad and hypermobility**

**Monday 20 April 2009**

**Dr Richard Hull**

2.10 pm **Hypermobility – developmental aspects of hereditary and acquired problems**

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### **BIOGRAPHY**

Richard has been a Consultant Rheumatologist Queen Alexandra Hospital, Portsmouth since 1989. He qualified in Birmingham in 1975. He trained in Rheumatology in Aberdeen. Hammersmith Hospital, London, the Canadian Red Cross Memorial Hospital Taplow and Northwick Park Hospital Harrow. These were national centres for arthritis in Children and young people. He has been on the Council of the British Society for Rheumatology and is a former Convener of the British Society for Paediatric and Adolescent Rheumatology. He has sat on the Rheumatology Committee of the Royal College of Physicians of London and currently sit on the Rheumatology Committee of the Royal College of Paediatric and Child Health.

He trained with the late Barbara Ansell who wrote one of the definitive papers on hypermobility in 1967. He has studied the association of osteoarthritis and hypermobility and did collagen studies in the 1980s. He has retained an interest in hypermobility in my children's, young person's and adult practice.

He has an interest in British traditional dance and regularly performs in public.

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## **Dance medicine: the female athlete triad and hypermobility**

**Monday 20 April 2009**

**Ms Rachel Rist**

Chairing Session four

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### **BIOGRAPHY**

Rachel is the Director of Dance at the Arts Educational School, Tring Park, Hertfordshire. She has a Master's Degree in Performing Arts, and is a published author of a first book, 'The Injured Dancer' (1986) and a second book 'Anatomy and Kinesiology for Ballet Teachers' (1996) and regular feature writer of many articles for dance magazines. She is the Past President of the International Association of Dance Medicine and Science, (President 2003 – 2005) and has served on its' Education Committee. She is currently the Chair of the Education Committee. She has twice hosted the annual IADMS conference in 1997 and 1999. Rachel was the Chair of the Faculty of Education for the Royal Academy of Dance, and a member of the Executive Committee. She has worked extensively with Dance U.K, as a member of the Editorial Board for the 'Fit to Dance?' reports, 1 and 2 and on the editorial board for the 'Dance Teaching Essentials' book, and acts now as a consultant for the Healthier Dancer Programme. Rachel is consultant to the magazine 'Dancing Times' on health and teaching practices for dancers and students.

She is on the Steering Committee for the Music and Dance Scheme's 'Excellent' projects and Vice Chair of the Council for Professional Dance Schools. Rachel is also the founder developer of a new qualification with Trinity International Examinations board on Safe Dance Practice. Rachel is on the Advisory Board of the Dancing Times.

She was external examiner for the dance degree course at Middlesex University and marked anatomy exams for the Royal Academy of Dance. She is external examiner for the MSc in Dance Science at Laban/Trinity. She

lectures extensively nationally and internationally on Dance Medicine and Training.

(Please see [www.iadms.org](http://www.iadms.org) - and click on Officers)

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**Dance medicine: the female athlete triad and hypermobility**

**Monday 20 April 2009**

**Ms Elizabeth Sharp**

**3.40 pm Management of hypermobility**

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**BIOGRAPHY**

Elizabeth Sharp received a graduate diploma in physiotherapy from St Mary's Hospital School of physiotherapy in 1963 and an MSc in neuromusculoskeletal physiotherapy from University College London in 1966. She is clinical Director of ES physical therapy Ltd Harley Street and a partner in ESPH East Dulwich. She has worked with musical theatre dancers in West End musicals for 20 years; students of musical theatre for 6 years and aerialists and circus performers for 11 years. She is committed to screening and injury prevention for performers. She is an accredited Polestar Pilates rehabilitation practitioner. Her other professional interests include isokinetic muscle assessment and rehabilitation; neurodynamic

differential diagnosis and treatment and exercise therapy for spinal mal-alignment and dysfunction.

## **ABSTRACT**

### **Method**

16 students with hyperextension of the knee and 16 without, age-sex matched took part in the study. Knee hyperextension was defined as extension greater than 10 degrees of normal range of motion.

Full knee extension was measured with a standard goniometer. Each student was also tested for generalised hypermobility according to the Beighton score. The torque of both hamstring and quadriceps muscles was measured on a KIN-COM isokinetic dynamometer.

### **Results**

Six individuals in each group had hamstring/quadriceps ratio <61%. Using non-parametric tests no significant difference in hamstring/quadriceps ratio was found between the group with knee hyperextension and normals, nor was any association with found with higher Beighton scores.

### **Conclusions**

Hamstring/quads ratio is similarly spread between individuals with and without knee hyperextension or generalised hypermobility. It is unlikely to be an explanation for increased risk of injury in hypermobile dancers.

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**Dance medicine: the female athlete triad and hypermobility****Monday 20 April 2009****Ms Helen Laws****4.15 pm A joined-up approach to dance medicine and science  
research and practice**

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**BIOGRAPHY**

Helen Laws has worked at Dance UK for its Healthier Dancer Programme (HDP) since 1998 and has been manager of the programme since 2001. With a remit to promote and advocate to improve dancers' health and performance she has organised conferences, events and talks; produced publications and information sheets; and facilitated and carried out research in the areas of dance health and science. She manages networks for dance medicine practitioners and researchers and dance professionals, encouraging communication across disciplines and providing a point of contact in the UK for those seeking advice, information or expertise in dance medicine and science. Helen studied ballet, tap, modern and contemporary dance from an early age and completed a BA(Hons) Degree in Dance at Roehampton University, London, in 1996. She also has a Diploma in Arts Management. She is the author of Fit to Dance 2 – The report of the second national inquiry into dancers' health and injury in the UK. Helen has served on various committees for the International Association for Dance Medicine and Science since 2001 and is currently a member of the IADMS board (2006/2007, 2008/2009).

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