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# British Journal of **Sports Medicine**

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## **BASM Annual Congress, Selsdon, 10–12 November 1989**

Some seventy members joined groups of yuppies at south-east London's premier conference hotel for a lively weekend combining sport with academe.

After Friday's registration cup of tea, Dr. Simon Payne of the Medical Protection Society spoke on Ethics. This was followed by a Reception sponsored by the Sports Council. Then **Dinner** – and the very late bar extension encouraged lively political discussions on both nights!

Saturday's first feature was the Tate & Lyle sponsored **Dietary Misconceptions**. Prof. Fred Bruons from Maastricht gave a brilliantly entertaining account of carbohydrate metabolism in the endurance athlete and his co-worker, Dr Nancy Rehrer, described detailed studies of gastro-intestinal symptoms in marathon performers (of whom some 40% suffer). Some of her messages were: concentrated drinks cause gut symptoms; excess high fibre diet causes cramps; pre-race fats cause upper g.i. discomfort and proteins nausea. Editorial Board member Prof. Tim Noakes from Cape Town described the metabolic fortunes of his group of ultra-long distance runners. His detailed accounts of collapse and hydration problems brought home the substantial differences between the ultras and mere Marathoners. Notable was the tendency for the former to get themselves overhydrated – a state almost unknown in the more intensively exercising latter group.

After coffee **Imaging – State of the Art** gave the clinicians much to ponder. Mr Francis Ring from Bath gave a beautifully illustrated account of **Thermography**. Though the equipment can be cheap, more sophisticated colour crystal techniques are becoming more widely available and are better in allowing more detailed studies both of pathology and recovery. Dr Terry

**Bloomberg** from Guildford showed good examples of ultrasound and CAT scanning and nuclear magnetic resonance imaging techniques in difficult clinical cases. There is little doubt about the diagnostic revolution posed by these newer techniques.

Saturday afternoon was given over to more hedonistic pursuits. There was squash for the coronary prone, walking and talking for the leisured classes and there would have been swimming but for the absence of water in the exclusive pool. Runners paired up in the frosty sunlight for an extended fashion parade which turned out to be a paar-lauf in which only teams of excessive combined IQ seemed to have a chance. The golfers, as usual planned the evening's prize-giving.

A tea-time session by Drs Steven Young and Ian Adams reviewed **Basic Treatments** – that perennial source of dogma, confusion and controversy for the therapists. The **Dinner**, with pre-lubricant reception, followed the now traditional pattern of food, drink, speeches and increasing ribaldry as the tension rose in the golfers' corner. The problem was that one of the distinguished guest speakers was nowhere to be found! Eventually, the bottles being empty, Tim Noakes drew the short straw and had to add a speech to his lecture! As he delivered a *tour de force* the situation was brilliantly retrieved. Sir Arthur Gold proposed 'Sport' and Chairman Dan Tunstall Pedoe responded to all and sundry. This left to the floor clear for prize-giving. *Pheidippides* cannot exactly vouch for the details, but thinks that the delectable Kirsten Skjøtt actually won the golf, but the boys carved up the freebies in the usual overcompensatory reaction. Modest marathoner Pat Milroy was awarded new balls; more aggressive recidivist Geoff Gard-

ner won something called Golden Ram Balls and Tom Crisp had his bag replaced. To put the wind up the mafia, Peter Thomas gave himself a prize too and the Mayor of Southampton Memorial Speech Lottery was tied between John Rees and Geoff Gardner, the result being 37 minutes.

Sunday saw Dr Frank Sanderson of Liverpool reviewing **Motivation**, then followed the **Short Paper Session**, with contributions on Diagnostic Ultrasound in Ankle Ligament Injuries, Physiological Assessment of Rowers, The Doctor in Professional Cycling, Psychological Factors associated with Injury Rehabilitation, and Nutrient Intake of Synchro and other Swimmers.

We then had the first ever **BASM Open Forum** at which the Executive faced the membership in discussion and debate. The success of this session is indicated by the list of no less than twenty-seven subjects raised, ranging from subs (raised) to sponsorships, Amsterdam to Bruges, position stands to team doctoring and the floating of a Football Team Doctors Group (co-ordinator Geoff Gardner). This was the first comprehensive and informative meeting of its type in memory and, by acclaim, will be a regular feature of future annual meetings. After this, it was no surprise that the AGM of BASM was dealt with expeditiously in record time.

Thanks are due to the Organizing Committee – Peter Thomas, Malcolm Bottomley, Di Middleton, Tom Crisp, Roger Hackney and Nancy Laurenson – and the Sponsoring Companies.

Thanks also to:- Lederle, Milk Marketing Board, Nomeq, A. H. Robbins, Panpharma, Wyeth, Pfizer, Rhone-Poulenc, Thomas Mason, Bauerfind, Medi-post, MRI Clinic, Glaxo, Tate & Lyle, The Sports Council.

**Pheidippides**



## Sports medicine current awareness service

Prepared by Kathryn Walter and Nancy Laurenson at the London Sports Medicine Institute (LSMI) Library

The following summaries are taken from a selection of recent journals indexed in the LSMI database. A full listing is published monthly in *Sports Medicine Bulletin*.

Copies of the complete articles are available (price £0.10 per sheet subject to Copyright Law) from the Library, LSMI, c/o Medical College of St Bartholomew's Hospital, Charterhouse Square, London EC1M 6BQ. Tel: 01 251 0583.

Tennis player Michael Chang was the surprise winner of last year's French Open despite having to stave off severe muscle cramps. In **Outwitting muscle cramps - is it possible?** (*Physician and Sportsmedicine* 1989, 17(9), 173, 176-8) Chuck Benda reviews the possible causes of muscle cramp and the variety of treatments which have been proposed for its relief. Low glucose, fluid loss, electrolyte imbalance, inadequate conditioning, overexertion, fatigue and injury may all play a role in the aetiology of muscle cramp. Applying pressure to the affected muscle, drinking fluids, stretching and potassium intake (often via bananas) are some of the methods used by athletes to overcome cramp. There is, however, no guaranteed treatment. One of the more unusual remedies is that of pinching the athlete's upper lip. The mechanism for the reported success of this method is unclear, but it may cause some alteration of neurotransmission to the muscle.

Competing in international events often involves travelling across several time zones. The resulting desynchronisation of physiological and psychological cycles has adverse effects on performance. General symptoms arising from this dysrhythmia are described in **Jet-lag and human performance** (Loat, C.E.R. and Rhodes, E.C. *Sports Medicine* 1989, 8(4), 226-38) and include malaise, appetite loss, tiredness during the day and disturbed sleep. Phase shifts occur in body temperature, ability to mobilise

energy substrates, excretion of water and metabolites, arousal levels, sleep/wake cycles and reaction time. The severity of these adverse effects and thus the time needed for resynchronisation depends on the ability to preset the bodily rhythms prior to flying, the number of time-zones crossed, the direction of flight, the type of individual (introvert/extrovert), age, social interaction and activity, diet plan and prescribed use of chronobiotic drugs.

It has been assumed in the past that because isokinetic testing protocols at the knee were considered reliable, they were also reliable for other extremity joints such as the ankle. Such generalisations should and are being questioned (Karnofel, H., Wilkinson, K. and Lentell, G. **Reliability of isokinetic muscle testing at the ankle** *Journal of Orthopaedic and Sports Physical Therapy*, 1989 11(4), 150-4). The results from this study suggest that a standardised protocol for isokinetic evaluation of the ankle for plantar flexion/dorsiflexion, and inversion/eversion using a Cybex II isokinetic dynamometer can be reliable for obtaining mean peak torque values in a healthy adult population.

Physiological evaluation of 862 participants in the 1985 World Masters Games seems to indicate that in middle-aged and elderly individuals a moderate level of regular physical training can improve the quality of life, reduce exercise-related ischaemic manifestations and slow the age-associated decline in cardiovascular function (Kavanagh, T., Mertens, D.J., Matosevic, V., Shephard, R.J. and Evans, B. **Health and aging of masters athletes** *Clinical Sports Medicine* 1989, 1(2), 72-88). Training regimens were quite modest and 90 per cent of the group participated in sport for social rather than competitive reasons. There were 756 competitors who underwent maximal exercise testing. Eleven per cent of tests were stopped because of ST-segmental depression, abnormal blood pressure response or complex ventricular ectopy. Peak power output and peak oxygen uptake were above

norms for the general population, resembling values for a sedentary adult of 25 years. The cross-sectional decline in peak oxygen (age range 29-79 years, average 3.5 ml kg min<sup>-1</sup> per decade) were considerably less than reported for a similarly aged sedentary population.

Short term health effects of anabolic steroids have been increasingly studied but long term effects are still unknown. This issue is addressed by Yesalis, C.E., Wright, J.E. and Bahrke, M.S. in **Epidemiological and policy issues in the measurement of the long term health effects of anabolic-androgenic steroids** (*Sports Medicine* 1989, 8(3), 129-38). The authors discuss the ramifications of the continued absence of information in this area, review the short-term health effects of anabolic-androgenic steroid use and describe methodological issues which must be considered when studying the long term health impact of these drugs.

A special issue of the *Internal Journal of Sports Medicine* 1989, 10, (3) S117-S190 presents the results of a 20-month longitudinal study in which 114 untrained volunteers (31 females and 83 males) were trained stepwise in a standardised way. At the end, 18 females and 60 males succeeded in running a marathon. The topics of this marathon study focused on some aspects of performance and on morphological, biochemical, hormonal, metabolic and haematological changes as a consequence of training and marathon running. In addition, the prevalence of injuries was studied during the whole period. A series of articles in a recent supplement of *Medicine and Science in Sports and Exercise* (1989, 21(5) A198-S225) is also devoted to the physiology and medicine of an endurance sport - the triathlon. 'State of the art' information concerning physiological changes observed during different length triathlons is offered, together with comments on the medical implications of these changes. Additionally, practical advice is given on how to set up

appropriate medical care facilities at triathlon races.

Type A individuals can be distinguished from Type B by both their physiological and psychological reaction to challenge. Type As have been found to create much of their own stress and to show an increase in neuroendocrine and autonomic responses when faced with challenge. A recent study investigated whether differences in sport competition anxiety, hard driving behaviours and response to the challenge of training and racing existed between Type A and B runners who engage in competitive road racing (Hinkle, J. S., Lyons, B. and Burke, K. L. **Manifestation of Type A behaviour pattern among aerobic runners** *Journal of Sport Behaviour* 1989, 12(3), 131-8). Results suggest that there was no significant difference between the two groups in sport competition anxiety, level of training and competitive behaviour. However there was a significant difference in the category 'running when not motivated'. It appears that Type A individuals ran more often when not motivated than did the Type Bs.

The role of physical exercise and its influence on resting energy expenditure has received considerable interest over the years (Poehlman, E.T. **A review: Exercise and its influence on resting energy metabolism in man** *Medicine and Science in Sports and Exercise* 1989, 21(5), 515-25). There are three primary components of resting energy expenditure (resting metabolic rate, RMR; thermic effect of feeding, TEF; thermic effect of activity, TEA). Of these the most valuable component in humans is the TEA which includes the energy expenditure due to physical work, muscular activity and purposeful physical exercise. It is the participation in exercise, both acute and chronic, which has been found to influence RMR and TEF. Reports in

the literature examining the relation between training, RMR and TEF are conflicting however. It appears that RMR may be elevated in (only) very highly trained individuals whereas TEF may be enhanced by moderate exercise training. Genetic variation, timing of the exercise bout relative to calorimetry measurements, and different criteria to define trained and untrained individuals are probable contributions to the divergent results found in the literature.

Achilles tendinitis commonly affects athletes in the running and jumping sports and is reviewed in Nichols, A.W. **Achilles tendinitis in running athletes** *Journal of the American Board of Family Practice* 1989, 2(3), 196-202. It results from repetitive eccentric load-induced microtrauma that stresses the peritendinous structures causing inflammation. Training errors such as excessive running mileage and training intensity, hill running, running on hard or uneven surfaces and wearing poorly designed running shoes are frequently responsible for the onset of Achilles tendinitis.

Biomechanical abnormalities which predispose to this injury include gastrocnemius-soleus muscle weakness or inflexibility and hindfoot malalignment with foot hyperpronation. Initial treatment is conservative with rest, cryotherapy, NSAIDs and biomechanical correction. Surgery is recommended only for persons with chronic symptoms who have not benefited from conservative therapy but who wish to continue running.

Magnetic resonance imaging for the diagnosis of Achilles tendinitis is described in **Fast scan magnetic resonance of Achilles tendonitis** (Berthoty, D., Sartoris, D.J. and Resnick, D. *Journal of Foot Surgery* 1989, 28(2), 171-3). A case report shows the most useful imaging sequence to be a sagittal low flip, angle-fast scan.

**In Skeletal system: A limiting factor to sports performance? A brief review** (*Journal of Orthopaedic Rheumatology* 1989, 2, 123-32) N. Maffulli examines how the structure and composition of some parts of the skeletal system may limit maximal sports performance capability. This paper looks at stresses under which the skeletal system is placed during sporting activities, highlighting the contribution of tendons, ligaments, entheses, articular cartilage, synovial fluid and bone to the locomotor apparatus.

Most occurrences of low back pain in athletes respond quickly to reasonable and acceptable forms of conservative treatment. Many of these incidences are related to either acute traumatic injury or effects of accumulative overuse activity. However, persistent low back pain in the athlete may be a potential indicator of serious low back dysfunction. **Biomechanical considerations for clinical application in athletes with low back pain** (Deusinger, R.H. *Clinics in Sports Medicine* 1989 8(4), 703-15) discusses the biomechanics, structure and movement of the lumbar spine as the basis for suggesting some alternative approaches to preventative treatment and rehabilitation of low back pain in the athlete.

The meaning of fitness in its association with physical activity and the relative importance of each in deriving health benefits is well examined in the article **Being habitually active in leisure time: Today's best buy for public health** (Mercer, T. *British Journal of Physical Education* 1989, 20(3) 137-44). The author also attempts to throw light on the patterns of habitual physical activity in late industrial societies and the methods used to determine its prevalence in these populations.

## News

### Porritt Fellowship

Applications are invited for the 8th Fellowship in honour of BASM's co-founder, Lord Porritt. Its purpose is to encourage study of the physiology and biochemistry of sporting achievement and/or sports injuries. Candidates must hold an FRCS or be a medically qualified member of a Royal College of Surgeons' scientific department. Apply by 27th April 1990; Full

details from: R.H.E. Duffet, Secretary R.C.S., 35/43 Lincoln's Inn Fields, London WC2A 3PN, UK.

The **British Institute of Sports Coaches** was recently set up to serve the wider coaching community below the level of national coaches, who are represented by the British Association of National Coaches (BANC). Details: Geoff Cooke, Chief Executive BISC,

College Close, Becket Park, Leeds LS6 3QH. tel: 0532-753365

### Jogger's Revenge?

Hard on our recent report of an East End tragedy we read of an elderly gentleman found dead in a Yorkshire road, putatively as a result of a contretemps with a jogger. (*The Guardian*, 4/12/89)

# Notes for Authors

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## Scope

The British Journal of Sports Medicine covers all aspects of sports medicine and science – the management of sports injuries; all clinical aspects of exercise, health and sport; exercise physiology and biophysical investigation of sports performance; sports psychology; physiotherapy and rehabilitation in sport; and medical and scientific support of the sports coach.

## Types of paper

Original papers (not normally over 3000 words, full length accounts of original research)

Review articles (up to 4000 words, providing concise in-depth reviews of traditional and new areas in sports medicine)

Case reports (up to 1000 words, describing clinical case histories with a message).

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## Manuscripts

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21 Sperryn, P.N. *SpoA and Medicine* Butterworths, UK 1983

22 Ellitsgaard, N. and Warburg, F. Movements causing ankle fractures in parachuting. *Br J. Sports Med* 1989, 23, 27–29

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## Footnotes

Footnotes should be used sparingly. They should be indicated by asterisks (\*), daggers (†), and double daggers (‡), in that order. In the manuscript, a footnote should be placed at the bottom of the page on which it is referred to and separated from the main text by a horizontal line above the footnote. Footnotes to tables should be placed at the bottom of the table to which they refer.

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Drugs should be referred to by their approved, not proprietary, names, and the source of any new or experimental materials should be given. If abbreviations are used these should be given in full the first time they are mentioned in the text. Scientific measurements should be given in SI units, but blood pressure should continue to be expressed in mm Hg.

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