

Editor: Domhnall MacAuley
Associate editor: Ron Maughan
Technical editors: Valerie Crean, Chris Wakefield
Editorial assistant: Mavis Burrell

| | | |
|-----------------|---------------------------|---------------------------|
| EDITORIAL BOARD | Steve N Blair (USA) | Per A Renstrom (USA) |
| | Steve Bollen (UK) | Craig Sharp (UK) |
| | Roslyn Carbon (UK) | Roy J Shephard (Canada) |
| | Peter Fricker (Australia) | Jack E Taunton (Canada) |
| | Wayne W Gibbon (UK) | Dan S Tunstall Pedoe (UK) |
| | Tim D Noakes (S Africa) | Brian J Whipp (UK) |
| | Moiria O'Brien (Eire) | Clyde Williams (UK) |
| | | |

NOTES TO CONTRIBUTORS The *British Journal of Sports Medicine* publishes articles on all aspects of sports medicine and science. Instructions to authors are given on the inside back cover. Papers for publication should be sent in triplicate to:

The Editor
British Journal of Sports Medicine
BMA House
Tavistock Square
London WC1 9JR
Tel +44 (0)171 387 4499; fax +44 (0)171 383 6668

NOTICE TO ADVERTISERS Applications for advertising space and rates should be made to the Advertisement Manager, *British Journal of Sports Medicine*, BMA House, Tavistock Square, London WC1H 9JR.

NOTICE TO SUBSCRIBERS The *British Journal of Sports Medicine* is published quarterly. The annual subscription rate is £162 (USA \$250). Orders should be sent to the Subscription Manager, *British Journal of Sports Medicine*, BMA House, Tavistock Square, London WC1H 9JR. Orders can also be placed with any leading subscription agent or bookseller. (For the convenience of readers in the USA, subscription orders, with or without payment, may also be sent to *The British Medical Journal*, PO Box 590A, Kennebunkport ME 04046, USA. All inquiries, however, must be addressed to the publisher in London.) Subscribers may pay for their subscriptions by cheque (payable to British Medical Journal) or by Access, Visa, or American Express by quoting on their order the credit or charge card preferred together with the appropriate personal account number and the expiry date of the card.

All inquiries about air mail rates and single copies already published should be addressed to the publisher in London.

COPYRIGHT © 1997 by the British Journal of Sports Medicine. This publication is copyright under the Berne Convention and the International Copyright Convention. All rights reserved. Apart from any relaxations permitted under national copyright laws, no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means without the prior permission of the copyright owners. Permission is not required to copy abstracts of papers or of articles on condition that a full reference to the source is shown. Multiple copying of the contents without permission is always illegal.

Published by the BMJ
Publishing Group

Contents lists and
Instructions for Authors
are now available on
the Internet:
<http://www.bjsportmed.com>

Printed in England on
acid free paper by
Stott Brothers, Halifax

Periodicals postage paid,
Rahway NJ. Postmaster:
send address changes to:
British Journal of Sports
Medicine, c/o Mercury
Airfreight International
Ltd Inc, 2323 Randolph
Avenue, Avenel,
NJ 07001, USA

ISSN 0306-3674

"CURRENT TRENDS IN SPORTS MEDICINE"

July to October 1997

GPF[®] FORUM

HEALTH EDUCATION

SPORTS MEDICINE



SEMINARS & EXHIBITIONS

PGEA & OCPPP CPD APPROVED

Programmes Organiser: Rose Macdonald, former Director, Sports Injury Centre, Crystal Palace National Sports Centre

MANCHESTER UNITED FOOTBALL CLUB - WEDNESDAY 2ND JULY 1997

Chair: Dr David Jones, BASM North West Chairman, GP and Sports Physician

- "Hand and Wrist Injuries in Sport" - Professor John Stanley, Hand Surgery Unit, Wrightington Hospital.
- "Non Invasive Imaging of the Upper Limb" - Dr. Charles Hutchinson, Senior Lecturer in Radiology, Manchester.
- "The Advancing Role of the Physiotherapist" - Chris Mallion, Chartered Physiotherapist, Diploma in Injection Therapy and Lecturer in Orthopaedic Medicine.
- "Shoulder Injuries in Sport" - Professor Simon Frostick, Orthopaedic Department, Royal Liverpool Hospital. Special Interests in Upper Limb Surgery and Micro Surgery of Peripheral Nerve Injuries.
- "The Psychology of Rehabilitation" - Dave Collins, Sports Psychologist, Crewe.

—oOo—

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, LONDON WEDNESDAY 9TH SEPTEMBER 1997

Chair: Mr. Roger Hackney, Consultant Orthopaedic Surgeon (RAF), MO BAF & British Cross Country Federation, International Athlete - 3 Olympic Games

- "Management of Cervical Disc Injuries" - Duane Saunders, Chairman of the American Physical Therapy Association
- "Cervical Spine Injury - Pitch Side Care" - Dr. Ben Gilfeather, Medical Director SIC Wrexham Park Hospital and Slough Sports Injury Centre, Medical Officer to England RFU 1987-93, British Lions and Wasps RUFC
- "Cervical Spine Injury in Rugby & Other Sports" - Mr. Nigel Henderson, Consultant Orthopaedic & Spinal Surgeon, Stoke Manderville Hospital, Aylesbury, Honorary Medical Advisor to Rugby Football Union.
- "Shoulder Examination" - Mr. Roger Hackney, Consultant Orthopaedic Surgeon
- "Shoulders in Sport" - Mr. Steve Copeland, Consultant Orthopaedic Surgeon, Royal Berkshire Hospital, Surgeon for Elite Athletes, Tennis, Swimming, Rugby, Jockey Club etc.
- "Integrated Shoulder Rehabilitation" - Howard Turner, Physiotherapist for the British Para Olympic Swimming Squad

—oOo—

SHEFFIELD WEDNESDAY FOOTBALL CLUB THURSDAY 18TH SEPTEMBER 1997

Chair: Dr. Brian English, Orthopaedic Physician, Northern General Hospital, Sheffield

- "Sports Nutrition - Some Practical Solutions" - Janette Crossland, Accredited Sports Dietitian, Consultant to the Lawn Tennis Association and the GB Junior Canoe Slalom Squad
- "Management of Cervical Disc Injuries" - Duane Saunders, Chairman of the American Physical Therapy Association
- "The Shoulder in Swimming and Throwing Sports" - Mr. David Fodden, A & E Consultant, Pinderfields General Hospital, National Swimming Squad for 10 years, GB Swimming Squad, Leeds City Swimming Club
- "Elbow in Sport" - Dr. Mark Batt, Senior Lecturer in Sports Medicine, Diploma in Sports Medicine, London Fellowship in Sports Medicine, University of California
- "Injuries in Professional Ice Hockey" - Dr. Brian English, Orthopaedic Physician, MO to Sheffield Steelers Ice Hockey, MO to Sheffield Sharks Basketball, Chief MO 1997 Everest Marathon
- "Sports Medicine - A Multi-Disciplinary Procedure" - Dr. Ravin Naik, Medical Director, Sheffield Sports Medicine Clinic at Sheffield Wednesday FC, MO to Sheffield Wednesday, Sheffield Sharks Baseball Team. Has set up the SIC at Sheffield Wednesday.

DURHAM UNIVERSITY - WEDNESDAY 24TH SEPTEMBER 1997

Chair: Dr. Ian Adams, BASM Chairman, Consultant Physician, MO Leeds United Football Club, Yorkshire CCC & International Athletics

- "Improving Access for the Knee Injured Athlete" - Cathy Lennox, Consultant Orthopaedic Surgeon, Hartlepool General Hospital, In charge of the NHS knee injury clinic at Hartlepool Hospital, MO to West Hartlepool Rugby Union Football Club
- "Demands on Young Players" - Ray Unsworth, Coaching Staff, Wigan Rugby League Football Club
- "Overtraining in New Sports" - Julie Sparrow, Chartered Physiotherapist, Physiotherapist Atlanta Games, Physio to GB Gymnastics Team at World Championships 1992, 1993 & 1994
- "Sport and the over 35s" - Dr. Ian Adams, BASM Chairman, Consultant Physician
- "Sports Medicine in General Practice" - Dr. Terry Crystal, GP BUPA SIC Leeds, Diploma in Sports Medicine, London England Rugby Team Doctor
- "Foot and Ankle Problems in Sportsmen" - Mr. Andrew Weeber, Consultant Orthopaedic Surgeon, Frail Ridge Hospital, North Allerton

—oOo—

MANCHESTER UNITED FOOTBALL CLUB THURSDAY 2ND OCTOBER 1997

Chair: Dr. David Jones, GP and BASM North West Chairman

- "Diagnosis and Surgical Management of Back Pain in Athletes" - Mr. Ian Shackelford, Consultant Orthopaedic Surgeon, North Cheshire Hospital, Stretton, Warrington
- "Physiotherapy Management of Back Pain" - James Davies, Physiotherapist to Essex County Cricket Club
- "Chiropractic Management of Back Pain" - Jeff Shurr, Chiropractitioner, Preston
- "Anatomical Explanation of Groin Pain - An Orthopaedic Perspective" - Mr. Martin Lovell, Orthopaedic Department, Hope Hospital, Manchester
- "Groin Disruption Syndrome" - Mr. Tony Blower, Consultant General Surgeon, Wigan Royal Infirmary

—oOo—

THE LEIGH CTC, DARTFORD - THURSDAY 23RD OCTOBER 1997

Chair: Mr. Roger Hackney, Consultant Orthopaedic Surgeon (RAF), MO BAF & British Cross Country Federation, International Athlete - 3 Olympic Games

- "An Overview of Overuse Injuries" - Mr. Roger Hackney, Consultant Orthopaedic Surgeon
- "Shin Splints and Related Conditions" - Dr. Graham Holloway, Consultant Orthopaedic Surgeon full time in Sports Injuries, Swindon and London
- "Achilles Tendon Injury - to Inject or not to Inject?" - Dr. Steve Motto, Musculo Skeletal Physician, Diploma Sports Medicine, London Bridge Clinic & British Olympic Medical Centre, MO to GB Rowing Team
- "Inferior Heel Pain" Dr. Dishan Singh, Senior Lecturer at Institute of Orthopaedics, Honorary Consultant, RNOHT. Co. Director, Foot and Ankle Clinic, RNOHT.
- "Foot Function & Injuries" - Trevor Prior, Lecturer on gait and Sports Injuries, University of Westminster, Podiatrist for West Ham, Chelsea and Leyton Orient Football Clubs
- "Clinical Tests to Determine when a Therapy Referral is a Must or a Luxury" - Neil Black, Ex International Athlete, BAF Physiotherapist, Olympic World European Championships

GPF[®] FORUM

HEALTH EDUCATION in conjunction with



British Association of Sport and Medicine



The companies attending the medical exhibitions are sponsoring the cost of the educational programmes. Your interest in the exhibitions therefore would be gratefully appreciated. Registration Fee: £55 (VAT inc.) for each event. Prices include lunch, refreshments and certificates. We look forward to your attendance at what are sure to be very informative and enjoyable events.

For further information and application forms please contact: G.P. FORUM, 92 BASLOW ROAD, SHEFFIELD S17 4DQ Tel: 0114 235 1660 or send your cheque (made payable to G.P. Forum) with your name, address and telephone number to G.P. Forum stating which event/s you wish to attend. GP's should include the name and number of their Health Authority.

ACKNOWLEDGMENTS

Referees

Dr MacAuley would like to thank the following who have generously given their time to help with the assessment of manuscripts during 1996.

| | | |
|-----------------------|----------------------------|--------------------------|
| Dr P Aagaard | Mr GF Goubran | Dr M P Miles |
| Mr IV Adair | Dr S Grant | Dr JS Milledge |
| Dr ID Adams | Dr PL Greenhaff | Dr P Milroy |
| Mr MJ Allen | Dr R Gregor | Dr S Moore |
| Miss CE Arbuthnott | Squadron Leader RG Hackney | Dr A Moran |
| Dr LE Armstrong | Dr G Haggerty | Dr S Motto |
| Professor N Armstrong | Dr J Hamill | Professor JF Mowbray |
| Dr P Bale | Dr TI Hansen | Mr K Murphy |
| Dr J Bangsbo | Dr AE Hardman | Ms MH Murphy |
| Dr O Bar-Or | Mr JRW Hardy | Dr N Mutrie |
| Dr EJ Bassey | Professor L Hardy | Dr JP Nicholl |
| Dr A Baxter-Jones | Dr CC Harling | Dr DC Nieman |
| Dr PA Bell | Dr MG Harries | Dr BM Nigg |
| Dr MF Bergeron | Dr U Hartmann | Professor MA Nimmo |
| Dr S Biddle | Dr R Hayward | Professor TD Noakes |
| Dr SR Bird | Dr AS Head | Dr RJ Northcote |
| Dr M Bland | Mr B Helal | Professor C O'Boyle |
| Mr S Bollen | Dr J Henrikson | Dr C O'Brien |
| Dr M Booth | Professor WS Hillis | Professor M O'Brien |
| Professor CAG Boreham | Dr L Hoffman-Goetz | Dr ML O'Toole |
| Dr GA Bray | Dr E Hultman | Dr BK Pedersen |
| Mr J Brewer | Dr M Hutson | Dr HM Perry |
| Professor D Brodie | Dr SR Iliffe | Miss S Phillips |
| Dr G Brown | Dr O Inbar | Dr K Piehl-Aulin |
| Professor S Brown | Dr P Jakeman | Dr YP Pitsiladis |
| Dr R Budgett | Dr RD Jaques | Dr E Poehlman |
| Dr R Carbon | Mr L Jarrett | Dr A Prentice |
| Professor D Carroll | Dr LL Ji | Mr T Prior |
| Dr DJ Chalmers | Mr D Johnson | Professor J Raglin |
| Dr JM Chevalier | Professor DA Jones | Dr R Ramsbottom |
| Dr P Clough | Dr P Kannus | Mr RJ Ratcliffe |
| Dr I Cockerill | Professor WR Keating | Mr M Read |
| Dr DAJ Connolly | Dr PS Keen | Professor T Reilly |
| Dr A Coulthard | Mr JB King | Dr A Rennick |
| Dr D Cowan | Dr P Komi | Professor PA Renstrom |
| Dr T Crisp | Dr J Koutedakis | Dr JC Reynolds |
| Dr M Crowe | Dr J Kremer | Dr C Riddoch |
| Dr T Crystal | Dr HKA Lakomy | Dr K Robertsen |
| Dr M Cullen | Dr B-M Landgren | Miss AP Rochester |
| Dr L Daly | Ms N Laurenson | Dr P Schot |
| Mr DJ Dandy | Professor MEJ Lean | Dr D Scully |
| Dr A Dent | Miss AJ Lee | Dr DF Sewell |
| Dr B Dineon | Dr J Leiper | Dr C Sharp |
| Dr W Dodds | Dr EL Lloyd | Professor NC Craig Sharp |
| Dr ER Eichner | Dr J Lloyd | Dr P Sharpe |
| Professor E Ernst | Dr JA Lombardo | Professor RJ Shephard |
| Dr RG Eston | Professor R Lorentzon | Dr JR Silver |
| Mr NA Evans | Dr JA McClure | Mr J Sim |
| Dr RC Evans | Mrs R Macdonald | Professor NC Spurway |
| Dr WJ Evans | Dr LD McGinty | Professor H Steinberg |
| Dr B Fair | Dr P Macintyre | Dr F Stewart |
| Dr T Featherstone | Professor WJ McKenna | Dr MJ Stokes |
| Dr L Fitzgerald | Dr G McKenzie | Mr AE Stroker |
| Professor P Fricker | Dr DPM MacLaren | Dr IL Swaine |
| Dr G Garbutt | Dr PJ McNair | Dr JE Taunton |
| Professor DA Geddes | Dr N Maffulli | Dr P Terry |
| Dr WW Gibbon | Dr C Mahoney | Dr R Thayer |
| Mr F Given | Dr AS Maisel | Mr D Theile |
| Dr M Gleeson | Professor R Maughan | Dr CH Thompson |
| Dr A Glover | Mr MB Melion | Dr PD Thompson |
| Dr S Going | Dr L Michaeli | Dr M Thorogood |

Dr JC Tidball
Dr H Tropp
Mr N Tubbs
Dr DS Tunstall Pedoe
Dr MS Turner
Dr V Unnithan
Dr W Van Mechelen
Dr M Verroken

Dr AJ Wade
Dr AB Walker
Professor A Wallace
Professor S Ward
Dr AWS Watson
Dr PB Watt
Dr D Watts
Dr EJ Watts

Dr ADJ Webborn
Dr GJ Welk
Professor BJ Whipp
Professor C Williams
Dr PT Williams
Dr RL Wolman
Mr CJ Woodhead
Dr R Zachariae

CALENDAR OF EVENTS

Sports medicine: a series of evening lectures and seminars in 1997

3 June; Preparing for exercise in the heat. Exercise and asthma
2 September; The child athlete: benefits and risks. Resuscitation and medical care at sports events
7 October; The role of sport and exercise in health promotion. Exercise and diabetes
4 November; Use and abuse of drugs in sport. Nutrition and exercise
2 December; Management of chronic over-use sports injuries.
Revision tutorial Registration fee £180
Further details: Vocational Training Unit, University of Aberdeen, Regent Building, Regent Walk, Aberdeen AB24 3FX. Tel: 01224 272431. Fax: 01224 272 079. Email: VTU-Aberdeen@abdn.ac.uk

British Olympic Medical Centre seminars

27 June 1997; Cardiac and respiratory problems in athletes
26 September 1997; Nutrition in elite athletes
12 December 1997; Difficult problems in sports medicine
The Charles Clore Lecture Theatre, Institute for Medical Research, Northwick Park Hospital, Harrow, Middlesex HA1 3UJ
Cost per seminar £50
Further details: Jenny Basing. Tel: 0181 864 0609

Intermediate Course: Sports specific injury management and normal examination of joints—Part 2

6–11 July 1997; Lilleshall Hall National Sports Centre, Shropshire (residential)
Further details: Education Office, British

Association of Sport and Medicine, c/o The National Sports Medicine Institute, Medical College of St Bartholomew's Hospital, Charterhouse Square, London EC1M 6BQ. Tel +44 (0)171 253 3244. Fax +44 (0)171 251 0774

Immune response to inflammation and trauma: a physical training model

10–11 July 1997; Defence and Civil Institute of Environmental Medicine, Toronto, Canada
Further details: Dr Pang Shek. Tel: (416) 635 2127. Fax: (416) 635 2104. Email: pang.shek@dcim.dnd.ca

XIX Symposium of the European Group of Paediatric Work Physiology

16–21 September 1997; The Manor House Hotel, Moretonhampstead, Devon, UK
Further details: Professor Neil Armstrong, Children's Health and Exercise Research Centre, University of Exeter, Heavitree Road, Exeter EX1 2LU. Tel 01392 264812. Fax 01392 264706

General sports medicine

21–26 September 1997; Lilleshall Hall National Sports Centre, Shropshire (residential)
Further details: Education Office, British Association of Sport and Medicine, c/o The National Sports Medicine Institute, Medical College of St Bartholomew's Hospital, Charterhouse Square, London EC1M 6BQ. Tel +44 (0)171 253 3244. Fax +44 (0)171 251 0774

Practical sport and medicine (course)

2–9 October 1997; Club La Santa, Lanzarote (residential)
Further details: Education Office, British Association of Sport and Medicine, c/o The National Sports Medicine Institute, Medical College of St Bartholomew's Hospital, Charterhouse Square, London EC1M 6BQ. Tel +44 (0)171 253 3244. Fax +44 (0)171 251 0774

16th Congress of sports medicine

10, 11 October 1997; Belfry Halls, Brugge, Belgium
Topics include: soft tissue injuries, physiology and nutrition, youth and physical performance, peripheral neurological disorders and sports, foot injuries and sports shoes, shoulder-arm pain and tension tests
Further details: Dr Michel D'Hooghe, President Brucosport, Hospital A Z Sint-Jan, Ruddershove 10, B-8000 Brugge, Belgium. Tel +32 (0)50 45 22 30. Fax +32 (0)50 45 22 38

Fourth world congress on sports sciences

22–25 October 1997; Monaco
Theme: Training and care of athletes—current concept and technologies
Further details: SPORTEL Organisation, Fourth IOC World Congress on Sport Sciences, 4 Bd du Jardin Exotique, MC 9800 Monaco. Tel: 377/93 30 41 59. Fax: 377/93 30 41 62

BASM national congress (London and South East Region)

6–9 November 1997; Hotel Metropole, Brighton
Further details: Education Office, British Association of Sport and Medicine, c/o The National Sports Medicine Institute, Medical College of St Bartholomew's Hospital, Charterhouse Square, London EC1M 6BQ. Tel +44 (0)171 253 3244. Fax +44 (0)171 251 0774

Intermediate course: Sports specific injury management and normal examination of joints—Part 1

23–28 November 1997; Lilleshall Hall National Sports Centre, Shropshire (residential)
Further details: Education Office, British Association of Sport and Medicine, c/o The National Sports Medicine Institute, Medical College of St Bartholomew's Hospital, Charterhouse Square, London EC1M 6BQ. Tel +44 (0)171 253 3244. Fax +44 (0)171 251 0774

British Association of Sport and Medicine



Education programme

The foundation course of this programme is the **General Sports Medicine Course** designed for medical professionals. **Five days PGEA approval are given for this course.**

The interdisciplinary **Intermediate Sports Injury Courses** concentrate on the proper examination of normal joints with regard to the diagnosis and management of sports specific injuries. **Five days PGEA approval are given for the Part 1 course and are being sought for the Part 2 course.**

The **Practical Sport and Medicine Course** held at Club La Santa, Lanzarote, has a curriculum that varies each year and further develops the practical examination and sporting themes of the intermediate courses. Delegates and families are welcome.

The **Diploma Preparation Course** is a **new course** aimed at providing doctors with a general sports medicine course at advanced level. It will prepare delegates for a sports medicine diploma examination and includes topics on joint examination and sports injury, physiology, medicine and resuscitation.

Forthcoming courses

| | |
|--|-----------------------------|
| Intermediate Sports Injury Course—Part 2 (new) (Full, with waiting list) £465 to £585, Lilleshall Hall National Sports Centre | 6–11 July 1997 |
| Diploma Preparation Course (new), (PGEA to be sought) Cost to be confirmed, Royal Hospital Haslar, Hampshire | 1–5 September 1997 |
| General Sports Medicine Course (Half full) £350 to £480, Lilleshall Hall National Sports Centre | 21–26 September 1997 |
| Advanced Sports Nutrition Course, (PGEA to be sought) Cost, date, and venue to be confirmed | Sept or Oct 1997 |
| Practical Sport and Medicine Course (Booking) £355 to £730, Club La Santa, Lanzarote (Residential, non-delegates welcome) | 2–9 October 1997 |
| 1997 BASM National Congress, (PGEA and CME being sought) (Booking) Metropole Hotel, Brighton | 6–9 November 1997 |
| Intermediate Sports Injury Course—Part 1 (Booking) £465 to £585, Lilleshall Hall National Sports Centre | 23–28 November 1997 |

Details of 1998 courses available on request

For further details and application forms please contact the BASM Education Office, The Anatomy Building, Medical College of St Bartholomew's Hospital, Charterhouse Square, London EC1M 6BQ (tel 0171 253 3244; fax 0171 251 0774; E-mail b.g.hill@mds.qmw.ac.uk).

INSTRUCTIONS TO AUTHORS

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 for full length accounts of original research); *Review articles* (up to 4000 words, providing concise in-depth reviews of both established and new areas in sports medicine); *Editorials* (these are written or commissioned by the editors, but suggestions for possible topics and authors are welcome); *Short papers* (short reports of experimental work, new methods, or a preliminary report can be accepted as 2-page papers; maximum length 1400 words including abstract, tables and legends); *Case reports* (limited to 850 words, one table or figure, a short unstructured abstract, and up to 10 references); *Correspondence* (the Editor welcomes letters, which should not exceed 300 words or contain more than three references; letters should be typed double spaced with wide margins and must be signed by all the authors). Contributions on historical topics or items with a medical and sporting interest are welcomed.

Manuscripts

The manuscript (four copies) should be double spaced throughout on A4 paper using one side only, with margins of at least 30 mm at the sides and at the top and bottom. Authors are asked to submit with their manuscript the names and addresses of three people who they consider would be suitable independent reviewers. They will not necessarily be approached to review the paper.

If the manuscript is accepted, both disk and typescript will be required for the final revised version; typescript alone will only suffice if the author has no access to word processing facilities.

Manuscripts must be accompanied by a declaration, signed by all the authors, that the paper is not being considered by any other journal and that it has not been accepted for publication elsewhere. Papers are considered on the understanding that they are submitted solely to this journal and do not duplicate previously published material. In cases of doubt, where part of the material has been published elsewhere, the published material should be included with the submitted manuscript to allow the Editor to assess the degree of duplication. All authors must have participated sufficiently in the work to take public responsibility for the contents (see *BMJ* 1991;302:338-41).

If requested the authors must be prepared to produce the data on which the manuscript is based for examination by the Editor.

Papers reporting results of studies on human subjects must be accompanied by a statement that the subjects gave written, informed consent and by evidence of approval from the appropriate ethics committee. Such papers should conform to the principles outlined in the Declaration of Helsinki (*BMJ* 1964;ii:177).

The Editor cannot enter into correspondence about papers rejected as unsuitable for publication, and the Editor's decision in these matters is final.

Style

The format must be as described in this section, although for reviews and letters to the Editor the use of subsections is flexible. **Abbreviations should be kept to a minimum and must always be explained.** Drugs must be referred to by their approved names.

1 *Title page*: should include the title (not more than 120 characters), a short title for running head, names and affiliations of authors (only one affiliation per author), and the name, address, telephone and fax numbers of the corresponding author.

2 *Abstract*: must not exceed 300 words and should be subdivided into four sections: Objectives; Methods; Results; Conclusions. Sections should not be combined. Statistical values should be given (confidence intervals preferred). The abstract should be followed by up to five key terms.

3 *Introduction*: outline of the background and rationale of the study.

4 *Methods*: this section should be sufficiently detailed to permit the reader to replicate the study. Published methods should be described in brief, with appropriate citation.

5 *Results*: should be concise and should not contain repetition of the methods. Data in the text should not be replicated in tables or figures or vice versa. SI units should be used, except for fluid pressures which should be in mm Hg.

6 *Discussion*: a clear distinction should be made between deduction and speculation.

7 *Acknowledgements*, where appropriate.

8 *References*: the Vancouver style must be used (see papers in this issue) with citations numbered consecutively in the order in which they appear in the text, tables, and figures. List all authors when there are six or fewer; if there are seven or more, list the first six, followed by et al. Except in the case of review articles the total number of references should not exceed 40. Responsibility for completeness and accuracy of references rests entirely with the authors. References will not be checked in detail by the Editor but papers in which errors are detected in the references are unlikely to be accepted. Submitted work or work in preparation cannot be cited in the reference list.

10 *Figures and tables*. Figures will generally be redrawn or relettered to conform with journal style, so they should be checked carefully by the authors. **Figure legends must always be supplied and must be typed on a separate sheet.** Colour illustrations may only be used if monochrome cannot show what is desired. Authors are responsible for part of the cost of colour figures. Use journal style in tables (see any issue). **Do not divide tables with rules.** Place brief explanatory legend at the top of the table (**not** on a separate sheet) and any further necessary clarification at the foot. All tables and figures must be referred to in the text.

Proofs

Contributors will receive one proof. Only minor corrections can be made. Corrections other than printing errors may be charged to the author. It is the author's responsibility to return the corrected proofs promptly and in case of absence to ensure that the editorial office knows a forwarding address.

Reprints

Reprints will be charged for. The number of reprints required should be stated on the form provided with the proof.

BASM NORTH WEST *presents* **TWO SPORTS MEDICINE SEMINARS** *at* **MANCHESTER UNITED FOOTBALL CLUB**

Chair: Dr. David Jones, BASM North West Chairman, GP and Sports Physician

WEDNESDAY 2ND JULY 1997

- **"Hand and Wrist Injuries in Sport"** - Professor John Stanley, Hand Surgery Unit, Wrightington Hospital.
- **"Non Invasive Imaging of the Upper Limb"** - Dr. Charles Hutchinson, Senior Lecturer in Radiology, Manchester.
- **"The Advancing Role of the Physiotherapist"** - Chris Mallion, Chartered Physiotherapist, Diploma in Injection Therapy and Lecturer in Orthopaedic Medicine.
- **"Shoulder Injuries in Sport"** - Professor Simon Frostick, Orthopaedic Department, Royal Liverpool Hospital. Special Interests in Upper Limb Surgery and Micro Surgery of Peripheral Nerve Injuries.
- **"The Psychology of Rehabilitation"** - Dave Collins, Sports Psychologist, Crewe.

THURSDAY 2ND OCTOBER 1997

- **"Diagnosis and Surgical Management of Back Pain in Athletes"** - Mr. Ian Shackleford, Consultant Orthopaedic Surgeon, North Cheshire Hospital, Stretton, Warrington
- **"Physiotherapy Management of Back Pain"** - James Davies, Physiotherapist to Essex County Cricket Club
- **"Chiropractic Management of Back Pain"** - Jeff Shurr, Chiropractitioner, Preston
- **"Anatomical Explanation of Groin Pain - An Orthopaedic Perspective"** - Mr. Martin Lovell, Orthopaedic Department, Hope Hospital, Manchester
- **"Groin Disruption Syndrome"** - Mr. Tony Blower, Consultant General Surgeon, Wigan Royal Infirmary

Promoted by: **GP FORUM**
HEALTH EDUCATION

The companies attending the medical exhibitions are sponsoring the cost of the educational programmes. Your interest in the exhibitions therefore would be gratefully appreciated. Registration Fee: £55 (VAT inc.) for each event. Prices include lunch, refreshments and certificates. We look forward to your attendance at what are sure to be very informative and enjoyable events.

For further information and application forms please contact: G.P. FORUM, 92 BASLOW ROAD, SHEFFIELD S17 4DQ Tel: 0114 235 1660 or send your cheque (made payable to G.P. Forum) with your name, address and telephone number to G.P. Forum stating which event/s you wish to attend. GP's should include the name and number of their Health Authority.

you

Scientific Basis of
**Health
Services**

BMJ

science

With contributions from
way to the future
management of

in care

day but the concept that the
on scientific evidence is less
conference. The Scientific Basis
can be rooted in research.

Available from: BMJ Publishing Group, PO Box 295, London WC1H 9TE,
medical booksellers or the BMJ bookshop in BMA House.
OR: Phone on our credit card hotline: 0171 383 6185/6245 or fax: 0171 383 6662

PRINT CLEARLY Please send me.....copy/ies of Scientific Basis of Health Services

Name

Address

Postcode..... Membership No:

☐ Cheque enclosed (made payable to British Medical Journal) £.....

☐ Debit my AMERICAN EXPRESS/VISA/MASTERCARD

Card No Expires

Signature

BMJ
Publishing
Group

Order your copy today