
SUBSCRIPTIONS

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BULLETIN OF THE BRITISH ASSOCIATION OF SPORT AND MEDICINE

SECRETARY'S REPORT – February 1985

During the last quarter very little has occurred on which the Secretary can report apart from an increasing amount of routine correspondence.

BASM's secretarial assistant, Mrs. Debbie Brunskill, who has been unwell for some time is now out of hospital and should shortly be returning quite fit.

Despite correspondence dating back to April 1984 difficulties have arisen concerning the precise wording of the draft Constitution adopted in principle at the 1984 Annual General Meeting but the Secretary very much hopes these matters will be resolved in the near future.

The venue for Congress 1985 will be decided at the Executive Committee Meeting to be held Thursday, 21st March and if we are to use University facilities rather than a hotel, the previously announced date first weekend in November will have to be advanced to the 27th, 28th, 29th September. The academic programme has yet to be discussed in detail but it is likely that members will again be invited to submit outlines of ten minute papers.

The inclement weather has forced the postponement of the Computerisation Sub-Committee but it is hoped a report will be made within the next few weeks.

At the suggestion of the Sports Council Standing Liaison Committee Meeting, general support in principle has been received for a major sports medicine and sciences meeting in England in 1987. It is likely that international support will be forthcoming, especially from North West Europe.

David P. Chapman

Prof. E. Ericsson, President FIMS, Mr. Howell, Dr. MacGregor and Mrs. Robin Tunstall Pedoe

Prof. Ericsson, Dr. Henry Robson

Dr. and Mrs. Joseph Muscat (Malta) and Dr. Peter Sperryn

CONGRESS 84

One of the first actions of Mr. David Chapman after assuming the post of Honorary Secretary was to suggest, then to organise the Association's first residential weekend Congress, combined with the Annual General Meeting. The venue chosen was the Strathallan Thistle Hotel, Birmingham, and excellent conference facilities, exhibition space, lecture rooms, bar and restaurant facilities were provided, including space for Congress Reception and an office.

Proceedings opened on the evening of Friday, 12th October with the display of the film "Chariots of Fire", portraying the early success of Harold Abrahams, younger brother of this Association's co-founder, Sir Adolphe. The following morning, invited lectures were given by Prof. Raymond Brooks (St. Thomas' Hospital) on the abuse of hormone preparations in sport, by Dr. Nick Whitehead PhD (Director – National Coaching Foundation) on excellence in sport, on medical care of teams abroad by Dr. Malcolm Read (Association of Olympic Medical Officers), and illustrated cautionary tales by Dr. Peter Sperryn on footware for athletes.

During the afternoon there were two simultaneous sessions for the presentation of submitted short papers, abstracts of which are included in this journal. A practical demonstration on testing the phases of recovery following injury was given by Mr. Dennis Wright, then a large number of those attending went on a run around Rotten Park Reservoir under the direction of Mr. Brian Webster, Physiotherapist to the British Olympic Track and Field Team.

The day's activities concluded with the Association's Dinner, at which the two principal guests were the Rt.Hon. Denis Howell, MP and Prof. Ejnar Eriksson, MD. Mr. Howell, though now in opposition, gave a great deal of support to sports medicine when in office as Minister with special responsibilities for sport. His speech was lively, amusing, and put forward views acceptable to all interested in sport, of whatever political allegiance. He paid special compliments to the help given to him and the Sports Council by our former Honorary Secretary, Dr. Peter Sperryn, and encouraged all concerned with sport and medicine to continue to make sport clean by eliminating doping and other unfair practices. He suggested that Baron de Courbertin could have expressed as an Olympic ideal "for athletes not only to take part in sport, but to take part on equal terms."

The first part of the Sunday morning was devoted to the Sir Adolphe Abrahams Memorial Lecture, given by Prof. Ejnar Eriksson of the Karolinska Institute, Stockholm, currently President of the International Federation of Sports

Dr. Ian Adams and Mr. Howell

Dr. Dan Tunstall Pedoe, Chairman BASM

Dr. James MacGregor, "The Guests"

Medicine, "FIMS". In a very well presented talk, illustrated with double projectors, he outlined the role of sports medicine in a community, citing as an example the programme of the Swedish Sports Medicine Association in the prevention of skiing and skating injuries by television educational films, advice printed on milk cartons, and the use of posters. Techniques for testing the efficiency of ski bindings were set up at some popular resorts, and reduced the injury rate significantly. Other hazards to school children were also considered – skateboards, roller skates and BMX bicycles among others. The co-operation of sports medicine with the legal administration proved successful in separating participants in these activities from traffic on the roads, and suitable head protection also played a big part.

The Congress concluded with the Annual General Meeting of the British Association of Sport and Medicine, reports of which are included in this issue of the journal.

It is hoped to repeat this successful weekend Congress in 1985, but the venue had not been settled at the time of going to press. Again we hope to devote a major part of the scientific programme to the presentation of short papers, so our readers are given this advance notice so that such papers can be prepared for submission.

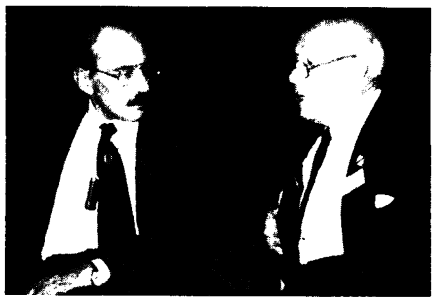
ACKNOWLEDGEMENTS

Those attending the Congress expressed their appreciation to the speakers, both the lecturers in the plenary session and to those presenting short papers. We also appreciate the trouble to which Prof. Eriksson went to travel to the UK for the Congress only to return the following month when we acted as hosts for the meeting of the North West Europe Chapter of FIMS. The bulk of the Congress organisation was done by the Honorary Secretary, Mr. David Chapman and his team; Mrs. Barbara Osborne, who took responsibility for the finances of the Congress, and Mrs. Debbie Brunskill who took minutes of business meetings and typed all the Hon. Sec.'s letters. Mrs. Olga Harris, the Treasurer/Editor's assistant helped with registration and matters pertaining to BASM membership. All three ladies worked exceedingly hard before and during the Congress, and the bouquets presented at the dinner were only a small appreciation of their contribution. The management and staff of the Strathallan Thistle Hotel gave us excellent service and were most helpful. We also express our gratitude to those who presented commercial exhibitions, making a substantial contribution to the Congress expenses, an and to Mrs. Paula Willcock, MCSP, the member of BASM's Executive Committee who took the responsibility of looking after the exhibitors.

We hope our readers will rally round to make Congress 85 equally successful.

Bouquets for the Staff, Barbara, Debbie and Olga

Rose MacDonald enjoyed the weekend



Secretary and President relax at last

ABSTRACTS

SHORT COMMUNICATIONS PRESENTED AT 'B.A.S.M. CONGRESS '84'. Birmingham, 13th October, 1984

Section 1. Orthopaedics

INJURY PREDICTION IN FEMALE GYMNASTS:

V.A.Steele, St. Luke's Hospital, Bradford., J.A.White, West London Institute of Higher Education, Isleworth, Middlesex.

In order to identify injury-proneness in female competitive gymnasts, twenty measures of flexibility, hypermobility, spinal posture and anthropometry were performed on 40 gymnasts and injury scores were derived from the severity and extent of previous gymnastic injury and inherent hypermobility traits. Results were compared between two contrasting groups of "low" and "high" injury groups respectively (both N=10) using Students 't' test. Nine variables demonstrated significant differences between the "low" and "high" injury risk status groups, namely, weight ($p<.001$), height ($p<.001$), age ($p<.001$), mesomorphy ($p<.01$), Quetelet Index ($p<.01$), shoulder flexion ($p<.05$) and lumbar extension ($p<.05$), standing lumbar curvature and total peripheral flexibility score (both $p\leq.05$).

These measures were then subjected to multiple regression analysis to determine to what extent each contributed to the estimation of injury-proneness as evidenced by previous history of injury and hypermobility traits. Using nine independent variables, multiple regression for injury prediction yielded a multiple correlation coefficient (R) = 0.840 and accounted for over 70% of the observed variance ($R^2=0.706$) in injury scores among the total group of gymnasts. However, a subset of five variables, (weight, mesomorphy, standing lumbar curve, age and height)yielded results which were not significantly different from the set of nine variables, with a multiple correlation coefficient (R) = 0.834 which accounted for almost 70% of the observed variance ($R^2=0.696$).

An injury classification system was devised consisting of "low", "medium", and "high" risk categories and comparasions made between estimated and observed injury scores in the respective risk categories. In 70% of "high" risk and 79% of "low" risk gymnasts injury scores were correctly classified, indicating that "high" and "low" risk injury status gymnasts, identified by past injury and hypermobility traits, could be determined with reasonable accuracy using relatively simple physical tests, which may be employed by practitioners in the field.

TENNIS RACKETS AND TENNIS ELBOW

R. Carroll - Physical Education Department, University of Manchester, Oxford Road, Manchester, M13 9PL.

The aim of the research was to find out the effects of selected types of tennis rackets on tennis players suffering from tennis elbow injuries. 22 Club tennis players suffering from 'tennis elbow' for varying periods of time from a few months to 15 years were studied over a period of 15 months, approx 1½ seasons. Players were interviewed for full details of their tennis elbow injuries, played with the researcher, and given selected tennis rackets to play their normal tennis matches whilst they kept a diary of their play with comments. The use of the rackets was monitored. For part of the test period the players played with 1 selected tennis racket (Dunlop 200G) for 642 matches of all types, for 1325 hours, and 2393 sets. At the end of this period 19 out of the 22 cases reported that their elbow injury had 'considerably improved' or 'almost cured'. This is significant at the 1% level against an expected improvement of half the sample. All the sample reported that they felt less vibration, jarring and pain with this racket than their own rackets or any other used during or before the test period. A 2nd sample of 18 players has been studied during the 2nd season and the initial results confirm the findings of the 1st sample. Tennis elbow appears to be a function of 4 major factors (i) physiological, (ii) technical, (iii) racket factors and (iv) frequency and intensity of play. The racket factor was the only major change. The 200G rackets used during the test period are a graphite construction - carbon fibres in a nylon mix by an injection moulding system. Laboratory tests shows that the vibration damping qualities of the racket are superior to wood, metal, and compression moulded graphite rackets in an epoxy resin mixture. The vibrational qualities of rackets appear to be important in the relief or deterioration of the tennis elbow injury. A change to a 200G is likely to bring about an improvement of the injury, even without medical attention. This study shows the application and value of modern technology in sports and raises the question of the dissemination of information to players and the medical world.

HABITUAL POSTERIOR DISLOCATION OF THE SHOULDER

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ROBERTSON, J A
Southampton General Hospital
Tremona Road
SOUTHAMPTON

Six patients with habitual recurrent posterior dislocation of the shoulder were assessed clinically, with cine radiography and EMG studies.

The EMG studies demonstrated an abnormal pattern of deltoid activity in which the muscle subdivided into anterior and posterior segments with independent function.

Treatment with faradism aimed at re-educating the muscle required from 12 to 26 treatment sessions before all returned to competitive sport. Review at from three months to two years post treatment reported no incident of recurrence.

SUBTALAR BIOMECHANICAL EVALUATION IN TENDO ACHILLES LESIONS

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SOUTHAMPTON

Fifteen patients attending with localized pain in the Achilles Tendon underwent a simple biomechanical evaluation of their subtalar range of movement. Six patients had palpable partial tears, two of whom later had surgical treatment. Fourteen patients with medial mid-tendon pain stood with the heel in calcaneo-varus and demonstrated little or no ability for heel eversion.

One patient with lateral mid-point pain stood in calcaneo-valgus and had no range of inversion.

A semi rigid, posted orthosis was prescribed and the patients re-evaluated three months from the time of "full wear" acceptance of the orthosis.

It has been shown that patients with mid-point tendo-Achilles pain have limited subtalar movement and that they benefitted from wearing a prescribed orthosis.

INJURIES IN SCOTTISH VETERAN HARRIERS

P. E. McGILL JANET FINDLAY D. SUMNER W. ARMOUR
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520 veteran athletes were invited to record details of their injuries sustained over the past five years and 250 replied. 197 recorded one or more injury (total 409) and 53 were uninjured. Injuries were analysed for their relationship to age, training/racing schedules, years running, speed (10K → marathon), shoes, severity, treatment and disability.

A similar number and range of injuries occurred in fast (5-5½ mins/mile), medium (5½-6 mins/mile), intermediate (6-7 mins/mile) and slow (> 7 mins/mile) runners. Age and number of years training had no effect on susceptibility to or severity of injury. Injuries to the knee (21%), achilles tendon (17%) and hamstring muscle (15%) were most frequent. Increase in distance training (for marathon) was responsible for many injuries. Increase in speed training and inadequate warm-up contributed to achilles injuries. Achilles lesions recovered best, hamstring next and knee injuries had the slowest recovery rate, especially in subjects with underlying radiological abnormality. Many athletes received no treatment. Physiotherapists were popular; doctors, in general, were not.

IMMEDIATE CARE FACILITIES FOR FOOTBALL AND BASKETBALL CLUBS

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Tremona Road
SOUTHAMPTON

The aim of the study was to assess the quality of first aid care received by amateur football and basketball players in the Southampton area.

A self administered questionnaire was sent to 54 Association Football clubs playing in the Hampshire Football League and 40 basketball clubs playing in the Solent Area League. An 88 per cent response rate was obtained.

Analysis of the data suggested that the quality of the first aid kit was less than adequate in 75 per cent of the sports clubs surveyed, and in only 45 per cent was a coach or trainer in any way qualified to give first aid. Few clubs took measures to prevent sports injuries.

Mr. Dennis Wright

Dr. John Atha

FUN RUN

TRUNK MUSCLE ACTIVITY INDUCED BY THREE SIZES OF WOBBLE-BOARD

A.K. BURTON, introduced by Sue Bracey

Osteopathic Association of Great Britain Research Unit, 30 Queen Street, Huddersfield HD1 2SP.

Co-ordination training by wobble-board exercising is well accepted for certain ankle ligament injuries although the design of wobble-boards is not standardised. It is possible that such exercising could also be of value in disorders of knee, hip or low back, but it is necessary to define the optimal dimensions for a wobble-board that will stimulate activity in the appropriate muscle groups before the necessary clinical trials can be performed. This study examines the effect on trunk muscle (and by implication lower limb muscle) activity from three designs of wobble-board. Electromyographic readings were taken from lumbar erector spinae and obliquus abdominis muscles whilst walking and whilst exercising on the wobble-boards which were of sizes and heights to permit maximum tilt angles of 8,15 and 30 degrees. The results showed that lumbar muscle activity was significantly increased (compared with walking) only by the 15 degree tilt board ($p < 0.02$). Abdominal muscle activity was not increased by any of the boards tested. This latter finding suggests that when tilting backwards use was probably made of plantar flexors and deep hip flexors to regain balance. Conversely recovery from forward or lateral tilts required erector spinae activity. The optimal dimensions of a wobble-board which will stimulate activity in the lumbar erector spinae (and arguably lower limb muscles) are defined as: A circular board of 350mm diameter set on a hemisphere of 55mm, allowing a maximum omnidirectional tilt of some 15 degrees. Such a device could be used to test the therapeutic and prophylactic value of co-ordination training for various disorders of lower limb joints and low back.

PSYCHOLOGICAL STRESS AND COMPETITION SKIING PERFORMANCE

Porteous, C. Burns, H J G. (McLatchie, G). University Dept of Surgery, Western Infirmary, Glasgow G11 6NT, Scotland

Performance in sport is accepted as being a function of psychological drive as well as acquired skills. This study of a physically complex sport - skiing - was carried out to assess the effects of pre-race psychological stress on performance. Eighteen experienced ski racers who had trained together and knew each others ability were asked to place each other in order of ability before a skiing season. A hypothetical ranking list was drawn up. The relative finishing order from the national races of the subsequent season were compared with this list and a positive or negative shift calculated. Psychological profile of each racer was assessed using a Multiple Affect Adjective Check List and 16 Personality Factor questionnaire (MAACL and 16PF). Pre-race stress was measured using continuous heart rate monitoring by an Oxford Medilog. The results show that skiers who do not race to their expected standard have heart rates significantly higher than base line heart rate in the 20 minutes prior to racing than their counterparts who do better than expected. No difference in personality was noted on MACCL between these two groups. On 16PF however a low heart rate and subsequent good performance were associated with factor N+ - shrewdness.

BLOOD LACTATE MEASUREMENT: PREPARATION OF AN INTERNATIONAL SPRINTER

J.Doust & P.Wesson: Department of Sports Studies, Roehampton Institute, London SW 15
Introduced by Mr. J.F. MacPherson-Stewart.

Physiological monitoring of athletes is increasingly common in sports demanding aerobic energy production but difficulties associated with measurement of anaerobic metabolism has limited work in this area. The recent development of a portable and rapid lactate analyser (YSI 23L Lactate Analyser) allows blood lactate concentration ([L]) to be measured routinely in the field. This report describes the method and a study of an international-level sprinter during 19 wks of training leading into the competitive season. Approximately 35μL of capillary blood is taken from a fingertip in a heparinised capillary tube. A 25μL sample is extracted by micropipette and injected into the analyser in the region of a probe containing lactate oxidase where lactate in the sample is broken down and the current from the resulting dissociated H_2O_2 measured after 45 secs. Calibration against lactate standards allows direct determination of [L]. At an initial test blood was collected at minute intervals following a 255 yd sprint. [L] showed a parabolic function with time, peaking at 9 mmolL 4 mins post-exercise. [L] fell to 7 mmolL after 8 mins and this period was used to set the rest intervals between repetitions for the subsequent training. At weekly intervals for 19 wks the athlete performed 4 x 255 yd sprints with blood samples taken at 2,2½,3 & 4 mins after the first and last repetition. The initial 9 wks of training was characterised by a progressively earlier and lower peak [L]

despite a progressive increase in anaerobic energy demand due to faster sprinting. Enforced rest due to injury in wks 11 & 15 was followed by an increased [L] compared with pre-injury. These results are interpreted in terms of changes in lactate production and removal and in alactic power. In conclusion, this instrument proved beneficial in allowing a rapid field measurement of [L] and gave a quantitative measure of anaerobic metabolism during sprinting and allowed the setting, monitoring and evaluation of training.
Analyser loaned by YSI Corp. Ohio USA through Clandon Scientific Ltd Aldershot U.K.

TESTING CARDIAC OUTPUT WITH EXERCISE: DOPPLER ULTRASOUND MEASUREMENT

Iyawe, V. I., Mehta, N., Cummin, A.R.C., Bennett,E.D., and Saunders, K.B.
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During experimentation with healthy volunteers, it is desirable that measurement of cardiac output ($\dot{Q}$) be devoid of risks. This study presents a method which assesses $\dot{Q}$ non-invasively on a beat-to-beat basis during exercise. The method involves the use of Doppler ultrasound in the measurement of blood velocity. We used a Bach Simpson blood velocity meter (BVM 202) to measure mean velocity (MV) in the ascending aorta and M-mode echocardiography (Echoline 21A) to measure aortic root diameter.Doppler $\dot{Q}$ was calculated from the product of MV and the aortic root cross-sectional area. A nitrous oxide rebreathing technique was used simultaneously to measure $\dot{Q}$.

Four healthy, but untrained, subjects volunteered for the study. Q measurements were made at rest and at two levels of exercise (50W and 100W) on a cycle ergometer. Exercise at each workload was sustained for three minutes and $\dot{Q}$ measured over the last 20 seconds of this period. $\dot{Q}$ values obtained with the Doppler were quantitatively similar to those obtained with rebreathing. The range of values measured was 3.26 to 5.52 L/min at rest, increasing to a maximum of 9.89 L/min during exercise. Regression analysis of $\dot{Q}$ values from the Doppler and rebreathing methods gave a correlation coefficient of 0.97.

We conclude that the Doppler ultrasound method provides an accurate beat-to-beat assessment of cardiac output during light to moderate exercise.

STRENGTH TRAINING, EFFECTS ON ELECTRICALLY EVOKED FORCE

M.J.N. McDonagh, M.R.C. Muscle Group, Department of Physiology and Pharmacology,
Queen's Medical Centre, Nottingham NG7 2UH.

The objective of the study was to see if increases in voluntary strength following training are accompanied by similar increases in electrically evoked twitches and tetani.

Seven subjects trained the first dorsal interosseus muscle of the left hand for 8 weeks using 80 maximal 10 sec isometric voluntary contractions per day. Each fortnight the maximum voluntary force and maximum twitch and tetanic force of this muscle were measured. Twitch and tetanic forces were evoked by supramaximal percutaneous electrical stimulation.

The training produced a 33% increase in maximal voluntary force but only an 11% increase in tetanic force.

Three other subjects who were training for the same period using 80 maximal electrically evoked tetani per day showed no increase in voluntary force.

It is concluded that: (1) Increases in the intrinsic force generating capacity of muscles are modest despite severe training, and (2) Most of the increases in voluntary force must come from increased voluntary neural drive to the muscles.

METABOLIC CHANGES FOLLOWING EXERCISE IN POST CORONARY PATIENTS

B. Davies,* A. Daggett,* D.A.L. Watt,+ D. Milne+

*Department of Human Kinetics, University of Salford
+Department of Medicine, Royal Preston Hospital

The effects of sixteen weeks of exercise training on functional capacity, fibrinolytic activity, blood lipid and lipoprotein concentrations, were studied in 17 male subjects [aged 42 - 57 years] with previously documented myocardial infarction. Following a functional graded exercise test [FGXT] designed to ascertain symptom limited functional capacity and exercise target heart rate subjects exercised for 3 x 45 minute sessions each week [compliance = 86%]. FGXT's were completed at eight and sixteen weeks training and each subject was monitored for electro-cardiographic changes for selected twenty-four hour period during the study. Creatine-Kinase [CK] and CK-MB were measured at selected phases of the training programme to assess specific myocardial responses of the subjects. Comparisons of pre and post training FGXT's showed significant changes in resting Systolic [SBP] and Diastolic [DBP] blood pressure, [$\bar{x}$ pre SBP = 135, $\bar{x}$ post = 123 mmhg

p = <0.01; $\bar{x}$ pre DBP = 87, $\bar{x}$ post = 79 mmhg, p = <0.01.] During Sub-Maximal Exercise SBP, Rate Pressure Products, Heart Rate [HR] and Blood Lactate [La] were significantly reduced [p = <0.01] at corresponding stages of the FGXT. Peak oxygen uptake [$\dot{V}O_2$ max] and ventilation [$\dot{V}E$] increased significantly, [$\dot{V}O_2$ $\bar{x}$ pre = 28.8, $\bar{x}$ post = 32 ml.kg.min. [p = <0.05]; and VE $\bar{x}$ pre = 71.2, $\bar{x}$ post = 85 L/min [p = <0.01].

Blood Lipids, total Cholesterol and High Density Lipoproteins did not change significantly following training. CK-MB was observed in some subjects following exercise sessions or FGXT.

Mean fibrinolytic activity as measured by Fibrin Plate Lysis Area increased following the pre-training FGXT by 64% and following the post training FGXT by 90%. [p = <0.01].

These results suggest that circulatory and metabolic changes have occurred in response to exercise training.

This research was funded by CAMPUS, University of Salford.

BASM

ANNUAL GENERAL MEETING 1984 — SUNDAY, 14th OCTOBER, 1984

Strathallan Thistle Hotel, Hagley Road, Edgbaston, Birmingham

Mr. James Robertson, FRCS

Registration: Mrs. Olga Harris and Mrs. Barbara Osborn

Dr. Malcolm Read

HONORARY SECRETARY'S REPORT 1983/1984

Members will have seen the quarterly reports published in the Journal and this report will survey the work throughout the last year and summarise the present position.

In accordance with paragraph 8 on the Agenda of the Annual General Meeting 1983, the Memorandum of the Association has been drawn up by the Association's legal advisers and agreed with the Inland Revenue and Charity Commissioners and a proposed new Constitution will be laid before the Annual General Meeting. All members will have previously received an individual copy of both documents. Considerable thought has been given to the costing of a re-structuring of the Association's administration on a professional basis but it has not been possible to present members of the Association with detailed financial estimates. The Secretary has, on behalf of the Association, sought accommodation for proper offices at the Sports Council Head Quarters, Crystal Palace National Sports Centre, Royal College of Surgeons, Royal College of Physicians, Royal College of General Practitioners, British Medical Association, Central Council of Physical Recreation, Loughborough University as well as commercial premises in both Central London and the provinces. It is clear that should the Association wish to professionalise its administration, considerably more funds must be made available.

An approach has been made to the Sports Council to consider the overall position and a survey is being prepared for submission to the Sports Council — a full report will be made in due course.

The Association continues to support the Standing Liaison Committee of Sports, Sciences and Medical Organisations hosted by the Sports Council. This committee has met once this year and is due to meet again before the Annual General Meeting where it may be possible to report positive action on a number of suggested topics. The committee has proved useful as a forum for exchange of ideas on neutral ground.

Dr. Peter Thomas, Reading, now represents the Association on the National Coaching Foundation and a nomination is to be made on the London and South Eastern Sports Council panel considering Excellence in Sport.

No new branches have been convened but activity had taken place in the Southern and Yorkshire/Humberside regions.

On behalf of the Association B.A.S.M. (Scotland) will have run another basic orientation course and plans are being made to run advanced/basic courses on alternate years on a regular basis.

Dr. Peter Sperryn has accepted the Executive Committee's invitation to act as Convener of Education and has tabled a report which has yet to be considered in detail.

It is clear that, associated with the rapid expansion in facilities for sport and recreation on a nationwide basis, the demand for information and help has increased tremendously and an increase in effort by members — as well as the Executive Committee — will be necessary to improve the services we have to offer, especially in the field of education.

HONORARY TREASURER'S REPORT

For year January 1st-December 31st, 1983

On the Income and Expenditure Account, it can be seen that there was a slight increase in the income from members' subscriptions, of about 10%, and a more substantial one of 25% from external sales of the British Journal of Sports Medicine, partly through an increased number of customers, but also from the high yield from $US paid by many of our overseas library subscribers. Against this, there was a 60% fall in advertising revenue, through the cancellation of the Boots advertisement and a general tightening of budgets of all pharmaceutical company's promotions by Government decree to 33% of previous years (but we have been able to secure a good contract with another company that will influence the 1985 journal income).

The printer's bill had risen a little, but this rise is trivial in comparison with our estimated costs for 1984. Half way through the year, the printing division of Messrs. Wells and Blackwell, who had produced our journal since 1967, was transferred to Messrs. Barrow Reprographics, also of Loughborough, though most of the team responsible for producing journals moved to the new firm, so there was no lack of continuity. Costs rose immediately, through a substantial rise in the price of paper, of wages and of postage, but despite a decreased number of pages in the 1983 Volume, 17, of 188 pages, compared with the 296 of Vol. 16 1982. Long articles with elaborate tables and numerous references are a luxury we can no longer afford.

J.S.M.& P.F. The fall of the pound against the dollar in the Autumn of 1982 also caught us out regarding the Journal of Sports Medicine and Physical Fitness. The £13 at which we advertised it yielded $25 and a small margin for administration in the Summer when the charges were announced, and we, of course, accepted this sum from those who ordered it early. By the Spring of 1983 £17 just covered the cost, but an increase in the cost of the journal to $30 and an even more adverse rate of exchange means that we shall require £24 for 1985.

B.A.S.M. Ties, etc. Against an apparent loss from the sales of ties, badges and shirts can be set new unsold stock in hand, which will yield a profit in due course.

Courses run by B.A.S.M. A most successful Advanced Course in Sports Medicine, our first, was run by Dr. Peter Thomas at Bisham Abbey. With administration and teaching he was supported well by his colleagues, practice staff, and members of our Association. Financially, he was supported generously from commercial sources, for which we are most grateful, and it enabled us to put £1,000 into deposit, once all expenses including honoraria had been paid, and £55 retained in the B.A.S.M. Southern Region account.

The F.I.M.S. Basic Orientation Course was held in Glasgow, run by Dr. James MacGregor, our Vice-Chairman and Secretary of the Scottish Area. It was held at Strathclyde University, whereas the 1984 course will be at Jordanhill College of Education. These courses are badly hit by limitation of general practitioners' expenses under Section 63, and the Strathclyde course ended without profit, nor loss.

Administration. Administration expenses had increased, but there were no Solicitors' bills in 1983 (but there will be in 1984 or 85!). The only travel grant given was to Mr. David Chapman, our new Honorary Secretary, who represented B.A.S.M. at the meeting in Finland of the North West Europe Chapter of FIMS. This event will be held in England in 1984 and Ireland in 1985.

The Balance Sheet requires little comment. Our tax liabilities are shown accumulating from past years, but the situation will have to be reviewed when we get Registered Charity status, our Memorandum of Association having already been approved by both the Charity Commissioners and the Inland Revenue. Most of the item under Debtors related to an account we sent for advertisements, and was paid early in 1984. Our creditors are the printers, whose account for the December issue of the Journal was also paid at the beginning of 1984.

The future. Any plans for the Association's future must involve finance. If B.A.S.M. is to provide any sort of service to sport, we must know which of our members can, and are willing to help. Who runs clinics? Where are they? N.H.S. or private? Can we suggest a medical adviser to a governing body or club who is knowledgeable in the techniques of that sport? Who can take part in Doctors' Fun Runs and other Games, nationally or internationally? Which sports scientists are willing to assess fitness levels? Who can coach the handicapped? Which physiotherapists, podiatrists or chiropodists can help with marathons? Who can advise runners about special stresses of distance running or competing in an unfavourable climate? Information of this sort, with an Association of well over a thousand members, can only be retrieved efficiently by computer, so computerisation of mailing lists, regional and special interest membership lists, address labels, and subscription records are obvious steps. To do this with efficiency, collection of subscriptions will probably have to be done through Direct Debit, a step to be taken with reluctance, but the treasurer of another biological society, with a similar membership, using these methods claims that he can collect and record a year's annual subscriptions in an hour. My secretary and I have already spent nearly a year, and there are still some to come in!

The Officers and Executive Committee are doing their best to give members a reasonably good service, but for a very low price. In your turn please given them your help and support.

H. E. Robson

BRITISH ASSOCIATION OF SPORT AND MEDICINE
INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 1983

		1983		*1982*
Income from members :				
Subscriptions		12,284		*11,934*
British Journal of Sport Medicine :				
Current issues :				
Sales	7,211		*6,030*	
Advertising revenue	2,420		*4,005*	
	9,631		*10,035*	
Cost of sales	13,940		*13,408*	
		(4,309)		*(3,373)*
Reprints :				
Sales	257		*650*	
Cost of sales	283		*395*	
		(26)		*255*
Deficit on sale of Journal of Sports Medicine and Physical Fitness		(43)		*(10)*
Sale of ties, shields, shirts etc :				
Sales	166		*268*	
Cost of sales	184		*365*	
		(18)		*(97)*
Deficit on sports medicine course		-		*(20)*
Donations		16		*1,127*
Bank interest		662		*857*
Bank interest - Adolphe Abrahams Memorial Fund		15		*18*
		8,581		*10,691*
Expenditure :				
Secretarial help Hon. Treasurer/Editor	1,568		*1,456*	
Secretarial help Hon. Secretary	228		*156*	
Travelling expenses	474		*1,535*	
Committee expenses	514		*665*	
Stationery and postage	1,801		*1,194*	
Subscriptions	234		*140*	
Auditors remuneration	345		*330*	
Bank charges	7		*10*	
Legal expenses	-		*632*	
Repairs and renewals	71		*32*	
Miscellaneous	-		*60*	
		5,242		*6,210*
		3,339		*4,481*
Appropriation to Adolphe Abrahams Memorial Fund		30		*32*
		3,309		*4,449*
Taxation : Corporation tax at 38% for 3 months and 30% for 9 months on relevant income *(1982 : 40% and 38%)*		220		*315*
Surplus for the year		£ 3,089		*£ 4,134*

BRITISH ASSOCIATION OF SPORT AND MEDICINE
BALANCE SHEET AS AT 31 DECEMBER 1983

		1983		*1982*
ASSETS EMPLOYED :				
Current Assets :				
Stock on hand	1,910		*1,380*	
Debtors and prepayments	2,525		*1,921*	
Balances at bank : No. 1 account	3,711		*1,661*	
No. 2 account	7		*7*	
Deposit account	10,692		*10,021*	
Adolphe Abrahams Memorial Fund : Balance at bankers	249		*219*	
	19,094		*15,209*	
Current Liabilities :				
Creditors	3,858		*3,368*	
Taxation	2,032		*1,812*	
Amount due to treasurer	86		*30*	
	5,976		*5,210*	
Net Current Assets		13,118		*9,999*
		£13,118		*£ 9,999*
FINANCED BY :				
Accumulated Fund :				
Balance at 31 December 1982	9,780		*5,646*	
Surplus for the year	3,089		*4,134*	
		12,869		*9,780*
Adolphe Abrahams Memorial Fund :				
Balance at 31 December 1982	219		*187*	
add : Appropriation from income and expenditure account	30		*32*	
		249		*219*
		£13,118		*£ 9,999*

Note :

The accounts reflect the activities of the Scottish Area only to the extent of the subscriptions due therefrom and included in members' subscriptions in the amount of £1,225 *(1982 : £1,118)*.

DR. H.E. ROBSON - Honorary Treasurer

REPORT OF THE AUDITORS

We have examined the books of account of the British Association of Sport and Medicine which reflects the transactions of the Scottish Area only to the extent shown in the note and we certify that the annexed balance sheet and income and expenditure account are in accordance therewith.

Loughborough
26 July 1984

ARMITAGE & NORTON
Chartered Accountants

BRITISH ASSOCIATION OF SPORT AND MEDICINE (SCOTLAND)

Annual Report 1984

and Accounts for 1983

Another successful year has seen Scottish Area continuing the development of sports medicine services and organisation.

Our AGM was held in association with an unusual seminar on "Ethics in Sports Medicine". Dr. Clifford Lutton had arranged a most interesting meeting at Meadowbank with diverse contributions including the personal account of the circumstances leading to a serious cervical lesion which in turn resulted in paraplegia. The incident in question occurred on the rugby field and raised a great many important issues which were widely discussed.

The annual Sports Medicine Course was again held in the West of Scotland, this time at the Further Education College, Jordanhill, under the auspices of BASM (Scotland) and the University of Strathclyde. The course was certificated by the International Federation of Sports Medicine (FIMS) and recognised by the West of Scotland Post-Graduate Medical Committee as meeting the requirements for post-graduate training of GP's under Section 63. The course was very successful — professionally, socially and even financially as it is likely to generate an operating surplus in excess of £1,000 can will be used to underwrite future endeavours in this direction.

The Scottish Sports Council has set up a new Committee to consider relevant aspects of sports medicine services in Scotland and I am pleased to report that its Chairman (along with many of the members of the Committee) are members of our Association.

We continue to provide advice and support at all levels — to individuals, clubs and, through the Medical Sub-committee of the Glasgow Sports Promotion Council, to organisers of larger sporting functions. Dr. Knill-Jones, the Glasgow Marathon Medical Officer, has co-ordinated the very extensive medical, physiotherapeutic and chiropodial efforts at the third largest marathon event in the world. A very large team, with many BASM members, provided medical logistical support at the Aid Stations *en route* and at the Medical Centre at the finish. Over 300 athletes were dealt with at the latter, the majority in a period of just 2-3 hours.

Your Secretary still gets requests for practical assistance with specific sports medicine problems and I am pleased to report that so far, we have always managed to find an effective solution with the help of our membership. We hope that we can continue to provide an unobtrusive, effective and acceptable responses to individual enquiries from recognised sources.

A very large International Conference is planned for Physical Education and Sports disciplines to be held in Glasgow immediately prior to the Edinburgh Commonwealth Games in 1986. *One* of the six disciplines chosen to run in parallel scientific sessions over 3-4 days in Sports Medicine and BASM (Scotland) has accepted responsibility for organising the keynote speakers, the scientific programme and the general administration of this part of the meeting. Here is an admirable opportunity to demonstrate the extensive interests and professional expertise of BASM to a wide variety of other professionals engaged in the study of physical performance.

In 1987 the city of Glasgow hosts the 2nd World Netball Tournament and once again BASM (Scotland) has an opportunity to demonstrate its ability to respond to a request for a sports medicine service. Your Hon. Secretary is a member of the General Purposes Committee of the Tournament Organisation and a Medical Services Sub-committee will be formed nearer the time.

All-in-all BASM is demonstrating a higher profile in Scotland than ever before and I am convinced that the conscientious delivery of effective sports medicine in all its forms to the competitor and his advisors will best serve our cause and more extensive recognition therefore follow.

Jim MacGregor, MSc, PhD, FIBiol
Hon. Secretary
BASM (Scotland)

Bioengineering Unit
University of Strathclyde
106 Rottenrow
Glasgow G4 0NW
041-552-4400 (Ext. 3027)

Accounts for Year Ended 31st December, 1983

	£		£
Cash in Bank at 1/1/83	1,488.78	75% of Annual Subs. paid to Parent Body	1,058.32
Annual Subs.	1,770.31		
Grants from Outside Bodies	200.00	Committee Expenses and Secretarial Costs	437.51
Bank Interest	67.12	Treasurer's Honorarium and Expenses (2 yrs.)	358.35
		Speakers and Conference Expenses	419.00
		Bank Charges	10.00
		Audit Fee	15.00
			2,298.18
Glasgow — 22nd February, 1984		**Balance in Bank at 31/12/83**	
		Deposit Account	—
		Current Account	1,288.03
			1,228.03
	£3,526.21		£3,526.21

Audited and Found Correct
I. W. Craik,
Auditor.

SOUTHERN AREA — Dr. P. Thomas

It has been a relatively quiet year after last year. The coaching education programme with Reading Sports Council is going into its third year. The scheme is to be incorporated into the National Coaching Foundation Course but the content will remain very much the same as far as sports medicine is concerned.

The sum of £440.08 remained in the Bank Account from 1983, and during 1984 no credits were received, nor debits paid.

YORKSHIRE/HUMBERSIDE AREA — Ms. S. Bracey

We had an inaugural meeting a few months ago which was well attended and formed a Working Committee — Ms. Bracey — Chairman of Podiatry Association, Mrs. P. Howard — Physiotherapist and Mr. G. Lister — Physiotherapist. The next meeting will be at Leeds Athletic Institute next week and we are hoping to arrange a meeting in 2/3 months of sports injuries and to then move around the region. We need help and support. Dr. H. E. Robson questioned if there was a doctor on the Committee and Ms. Bracey replied that it was hoped there would be one but at present nobody had volunteered.

Balance Sheet for the Year 1984

Date	Description	Debits	Credits	Balance
27/6/84	Donation from BASM		200.00	200.00
17/10/84	E. Sheehy			
	1. Sherry for meeting at Leeds Athletic Institute	13.76		186.24
	2. Travel expenses to working party meetings	13.00		173.24
18/10/84	Miss G. Caird Secretarial Services May-Oct. 1984	60.00		113.24
18/10/84	Mrs. Pauline Howard Stationery, Postage & Travel. May-Oct. 1984	116.20		— 2.96
		202.96		— 2.96
20/11/84	Donation from BASM		200.00	
				£197.04

FUTURE MEETINGS OF BASM AND OTHER ORGANISATIONS

DATE	ORGANISATION	VENUE	APPLICATIONS TO:	MEALS	ACCOMN.	FEES
1985						
Thurs. 18-19 Apr.	Brit. Ass. Nat. Coaches (incl. NCF, & BASS "WORKSHOPS" MATCH ANALYSIS IN SPORT	Sheffield Polytechnic. Notice rec'd 4/2/85. Closing date March 21 but late applications may be accepted	Dr. J. Alderson, PhD, Dept. Recreational & Environ. Studies, Sheffield Polytechnic, Wentworth Woodhouse, ROTHERHAM S62 7TJ	Included	Included	£35 Workshop. Meals, Accom. £11 day rate incl. lunch
Thurs. 18-21 Apr.	Balkan Congress on Sports Medicine	Hotel Veliko Tarnova, 2 E. Popov St., VELIKO TARNOVA, Bulgaria :	Dr. Petar Slunchev, Tina Kirkova Str. 1, VIF "G' Dimitrov, VI Balkan Congress on Sports Medicine, SOFIA 1,000, Bulgaria	Extra or ½ board	Hotel	Registration $60 US $30 B & B, single/day $39 ½ board/day
Sat. 20 Apr. 9.30 a.m.	Pre-Marathon Medical Meeting. Speakers from BASM & American Joggers' Assoc.	Waterloo Room, Royal Festival Hall, London	Just turn up.	No	No	No fee
Sun. 21 Apr.	BASM Scotland Clinical Meeting and Area AGM	P-G Med. Centre, 5 Lancaster Terrace, GLASGOW G12 0RR	Dr. J. MacGregor, Bioengineering Dept., Strathclyde University, GLASGOW G4 0NW	No	No	Not known
**Fri. 10-15 May	Diagnostic Imaging Spring Seminar	London	Medical Seminars International, West Park Medical Office Bldgs., Suite 104, 22135 Roscoe Blvd., CANOGA PARK, Calif. 91304, USA	No	No	$385 US
Sun. 12 May	DOCTORS' RUN	Langholm, Dumfriesshire (On A7, 20 mi N. of Carlisle)	Dr. T. Kennedy, Health Centre, DUMFRIES DG13 0JY (Incl. large S.A.E.)	No	No	Not known
**Wed. 15-19 May	Diagnostic Seminar	Stockholm, Sweden	as above, marked **	No	No	$385 or $495 for both
Sun. 2-5 June	3rd International Congress Medicine in Football	Zappeion Palace, ATHENS, Greece	Messrs. George Doxas & Partners Ltd., P. Zervou 23, Psychico, ATHENS 154 52	No	No	$130 $50 accom. persons
Sat. 22-30 June	Medical Olympic Games	Monte Carlo, Monaco	Dr. David Delvin, 'General Practitioner', 30 Lancaster Gate, LONDON W2 3LP	Not known	Not known	Not known
Sat. 29 June-6 July	Medical Seminars International. Computed Tomography and Diagnostic Imaging	Cruise of the Inland Passage, Alaska	Medical Seminars International, West Park Medical Office Bldgs., Suite 104, 22135 Roscoe Blvd., CANOGA PARK, Calif. 91304, USA	Not known	Not known	Registration fee before 28 Apr. $325, after — $395
Wed. 7-25 Aug.	"Masters' Games". Competition in 22 disciplines, for the older competitor, usually > 40♂ > 35♀ including Sports Med. Seminar	Ontario, Canada	Details from Hon. Sec. BASM, Mr. D. Chapman, Half Moon Place, Burwash Road, HEATHFIELD, E. Sussex	Included	Included	Not known
Sun. 18-27 Aug.	Primary Care for Student Health	Hebrew University, Jerusalem, Israel	Dr. B. J. Kaplan, Director, Student Health Service, Hebrew University, PO Box 3888, JERUSALEM 91037, Israel	Not known	Not known	Not known
Sun. 18 Aug.-1 Sept.	Medical Seminars International. Diagnostic Imaging. Summer Symposium	Tour of France, Switzerland, Germany and Holland	Summer Symposium — Medical Seminars, West Park Medical Office Bldgs., Suite 104, 22135 Roscoe Blvd., CANOGA PARK, Calif. 91304, USA	Not known	Not known	Registration fee $350 before Apr. 1 then $395
Mon. 26-30 Aug.	6th World F.I.N.A. Medical Congress. "Medical aspects of Aquatic Sports"	University of Otago, DUNEDIN, New Zealand	Mr. L. F. Dey, Congress Secretariat, 7th World F.I.N.A. Medical Congress, PO Box 6171, DUNEDIN, New Zealand	Not known	Hotels and University Halls of Residence	Not known

BRITISH JOURNAL OF SPORTS MEDICINE

GUIDANCE FOR CONTRIBUTORS

Several types of communications will be considered for publication by the Editorial Board.

1. ORIGINAL ARTICLES, reporting research, experimental work, innovations in therapeutic procedures, etc.
2. REVIEW ARTICLES on special topics, which should include an adequate but not necessarily an exhaustive bibliography.
3. ABSTRACTS of verbal communications given at scientific meetings. These may be published as 'Proceedings' of meetings, and sometimes the author might be invited to submit a fuller edited text of his talk, together with illustrations.
4. ANNOTATIONS, case reports, preliminary reports of research, and of pilot studies, usually not exceeding 400 words.
5. CORRESPONDENCE, – 'letters to the Editor'.
6. CONFERENCE REPORTS from Area organisations of B.A.S.M., or of other meetings with direct relevance to the work and interests of B.A.S.M. members.
7. NOTICES of forthcoming events relevant to Sports Medicine.
8. OBITUARY NOTICES concerning B.A.S.M. members and others distinguished in Sports Medicine.

SUBMISSION OF MANUSCRIPTS

These should be sent to the Editor, Dr. H. E. ROBSON, 39 Linkfield Road, Mountsorrel, Nr. LOUGHBOROUGH, Leics. LE12 7DJ Tel. 0533-303436 (surgery) or 0533-303971 (home)

Two copies of each manuscript should be submitted. They should be typewritten, double spaced, on one side of the paper only, in English, with conventional British spelling.

The title of the paper should be typed in capitals, with the name and principal qualifications of the author(s), e.g. "FRCS", "DipPE, PhD", "MSc(Psych)", "MB, BS, PhD" or "MCSP", then the appointment held, the department and the institution in which the work was carried out. If the author has moved since the work was performed, his present address should be added as a footnote.

In general, manuscripts should be prepared in accordance with the recommendations of the International Steering Committee of Medical Editors, the "Montreal Agreement". A booklet is obtainable from the Editor, British Medical Journal (50 pence), or Annals of Internal Medicine, 4200 Pine St., Philadelphia for U.S. authors.

AN ABSTRACT not exceeding 150 words should follow the heading of a long paper. This should include the chief points made in the paper, and the main conclusions drawn or suggested. Only very essential references are included here. On the advice of the Editorial Board, a communication may be published in abstract only. Following the Abstract, some three to six KEY WORDS should be inserted to assist with indexing.

NOMENCLATURE. Drugs should be specified by their official name, followed by the trade name and manufacturer's name in brackets if well known and widely prescribed under its trade name. Doses should be in metric measurements. S.I. units should be used, except for measurements of blood pressure, which should be in mm. Hg. Conversions from one system of measurements to another should be rounded off, and in all tables unnecessary decimal places should be avoided, as they are usually due to the mechanics of the computer, and not to accurate scientific measurement.

REFERENCES mentioned in the text should give the name of the author, or first author followed by 'et al' for multi-author papers, with the date of publication in brackets, e.g. "Wright, et al (1976)". In the reference section, the authors' names should be arranged in alphabetical order, followed by year of publication, title of paper, journal, volume number, and first and last pages, e.g. "WRIGHT, G., CLARKE, J., NINIMAA, V. & SHEPHARD, R. J. 1976 'Some reactions to a dry-land training programme for dinghy sailors' Brit.Journ. Sports Med. 10: 4-10". For text-book references, the author, editor, year, title of chapter, title of book, edition number, publisher, and city of publication should be given. Our retention of the "Harvard System" of references is our only major deviation from the recommendations of the Montreal Agreement.

ILLUSTRATIONS should preferably be drawn on card in indian ink, with labelling lightly in pencil, or written or typed well clear of the actual drawing or graph. Good quality half-tone photographs may be used if suitable for reduction to fit the space allocated. Coloured photographs will only be reproduced in half-tone and X-ray plates and transparencies cannot be guaranteed to give adequate reproduction. If necessary, a second photograph with arrows or lettering should be included, as a guide to the block-maker. Figures are numbered in Arabic numbers.

Authors are reminded that they are responsible for clearing copyright on any figures, tables or other matter already published elsewhere, and the Editor may require written authorisation to the author from the copyright holder. He may also require signatures on the letter accompanying MSS from ALL the contributors of multi-author papers.

PROOFS are corrected by the Editor, but usually sent for checking to the author, who should return them to the Editor without delay. Any extensive re-setting of type because of an author's "second thoughts" could be charged to the author. Owing to postal delays, even with airmail, proofs are not always returned to authors from overseas.

REPRINTS

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		US
1 page	£ 17	$ 36
2 pages	£ 26	$ 40
4 pages	£ 36	$ 60
8 pages	£ 65	$ 95
12 pages	£124	$170

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Preferred method of payment from overseas, Bank Drafts in Sterling.

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THE EDITORIAL BOARD reserve the right to accept, reject, edit or otherwise correct any manuscript submitted. The opinions expressed in articles, book reviews or letters are those of the author, and do not necessarily agree with those of the editor, editorial board, or executive committee of the British Association of Sport and Medicine.

These notes were revised in June 1982 for Volume 16.