

Australian Association of Musculoskeletal Medicine

Bulletin



Spinal Research in Australia - page 14

Australian Association of Musculoskeletal Medicine



Bulletin

Vol. 1 No. 1

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The A.A.M.M. Bulletin is published by the Australian Association of Musculoskeletal Medicine for medical practitioners interested in the aetiology and management of musculoskeletal disorders. Opinions expressed are those of the authors and not necessarily those of the editor or the Association. Editorial comment may reflect the opinions of the editor alone. Contributions on any relevant topic are welcome for submission to the editor, Dr. Wade King, 454 Peel Street, Tamworth, NSW, 2340, telephone (067) 66 6166, a.h. (067) 67 8262.

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About the



The Australian Association of Musculoskeletal Medicine is comprised of medical practioners interested in disorders of the musculoskeletal system.

The Association was formed on 6th December, 1971, when thirteen doctors met in Melbourne to discuss their common interest in the conservative management of back pain and other musculoskeletal problems. Ten others sent their apologies and these twenty-three became the foundation members of the association. The name Australian Association of Manipulative Medicine (A.A.M.M.) was chosen to reflect the common interest in manipulation, especially of the spine, as one form of conservative physical management. The name was distinctive, as most doctors then professed no interest in spinal manipulation and the scientific basis for such treatment was known to few. Several founding members of the new association were already members of the British Association of Manipulative Medicine (B.A.M.M.), which had been formed some ten years previously with similar objectives.

The fledgling A.A.M.M. held clinical meetings and annual conferences and encouraged members to present and publish scientific papers on relevant subjects. For several years the annual conferences were held in conjunction with the Australian Association of Physical and Rehabilitation Medicine (A.A.P. & R.M.), another group with some interests in common and to which some A.A.M.M. members also belonged (as indeed some still do).

By 1978 membership of A.A.M.M. had grown to 130 and organisation was strong enough to sponsor a large meeting with international guest speakers. Professor Malcolm Jayson of Manchester and Professor Justin Lehmann of Washington joined Australian academics and clinicians in a three day conference on back pain research. The meeting was well reported in the Australian medical press and the activities of the Association were seen to be providing leadership in an important area of need in medical practice. The A.A.M.M. seemed to have come of age.

In 1982 the Association met to consider a change of name. By then membership had reached 200 and encompassed a range of interests not adequately described by the term "Manipulative". After considerable discussion the name Australian Association of Musculoskeletal Medicine was chosen,

with the same initials as used previously. At the same time the constitution of the Association was amended to give better expression to the interests of members in all aspects of conservative management of musculoskeletal disorders.

Today the A.A.M.M. has a membership of approximately 300 doctors in all states of Australia. Their activities are spread over a broad range of musculoskeletal disciplines including orthopaedic medicine, manipulative medicine, osteopathic medicine, physical medicine, rehabilitation, rheumatology, acupuncture, neurology and orthopaedic surgery. The Association fosters interests in all musculoskeletal treatments consistent with scientific principles and encourages a wide range of treatment options with the use of the least invasive method appropriate to the management of each individual patient. In addition, the Association is active in the fields of education and research.

Meetings are held regularly in a number of centres and annual conferences with international guest speakers are now the rule rather than the exception. As well, the Association regularly sponsors speakers of high standing in other countries to come to Australia for lecture tours and instruction courses which members and others are encouraged to attend.

The Association conducts its own courses for medical graduates to learn or improve particular skills in musculoskeletal management. It also co-operates with other bodies active in postgraduate medical education, such as the University of Sydney's Coppleson Postgraduate Medical Institute and the Royal Australian College of General Practitioners. Some members of the A.A.M.M. are involved in the education of medical undergraduates and physiotherapists.

Dissemination of information about musculoskeletal medicine is another area of activity. Through its own publication, the A.A.M.M. Bulletin, and through letters and articles in other medical publications, members' perceptions are shared with a wide medical audience. The Association also acts in an advisory capacity to professional organisations and government bodies when musculoskeletal issues arise.

Some members are engaged in research, both laboratory projects and clinical studies. The Association encourages this and a committee on research and education meets regularly to consider ways of facilitating research and to develop better methods of spreading musculoskeletal knowledge and skills. A research proforma, to assist in the collection of comparable data by practioners engaging in clinical studies, is available to members on request. *

The A.A.M.M. liaises with other groups with similar interests, both in Australia and overseas. In this country, the Association maintains relationships with the A.A.P. & R.M. (as mentioned above), the Australian College of Rehabilitation Medicine, the Royal Australian College of General Practitioners and the Australian Medical Association, as well as numerous universities, hospitals and other bodies. Outside the country, the A.A.M.M. has close ties with its sister organisations the New Zealand Association of Musculoskeletal Medicine (N.Z.A.M.M.) and the British Association of Manipulative Medicine (B.A.M.M.). All three, together with some twenty other

national bodies, are affiliated with the International Federation of Manual Medicine (F.I.M.M.). By correspondence, and when possible by direct contact at meetings and conferences, members share in a world-wide movement towards improved management of musculoskeletal disorders.

The A.A.M.M. is not an association of specialists. Some members, certainly, are registered specialists in physical medicine, rehabilitation, rheumatology, neurology and orthopaedic surgery. Some others practise full-time in the fields of orthopaedic medicine, physical medicine and manipulative medicine. The majority of members, however, are general practitioners interested in the problems of musculoskeletal disorders and many have been drawn to the Association by the inadequacy of some widely-practised methods of management of these conditions. Membership of the A.A.M.M. is open to all medical practioners who share the desire to improve methods of alleviating the suffering caused by some of the most common and most painful afflictions of mankind.



For the record, founding members' present at the first meeting of the A.A.M.M. on 6th December, 1971, in Melbourne were:

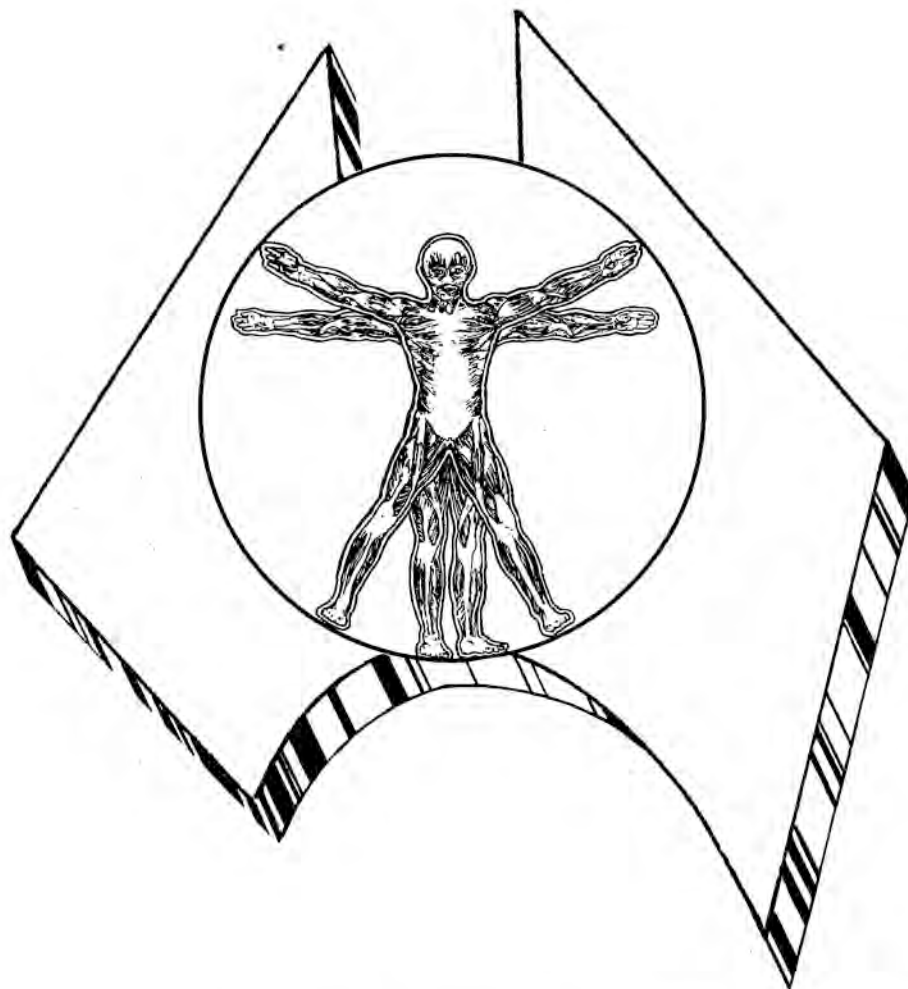
Drs. Gordon Byth, Brian Corrigan, Terence Doran, Michael Grounds, Michael Heffernan, Sinclair Hutton, John Livingston, Frank May, Jeffrey Phillips, Gordon Rich, Howard Rivett, Ian Roddick and Geoff Toakley.

Apologies were received from:

Drs. Ed Allchin, John Bosler, Bunt Burnell, Charles Coghlan, John Hutchins, Geoffrey Miller, Eric Milne, Brendan Pitts, Charles Shugg and Conrad Winer.

A debt of gratitude is owed to these twenty-three by all who have enjoyed the privileges of membership since.

A LOGO FOR THE A.A.M.M.



Members not suffering from amblyopia or brain failure will have recognised the logo on the cover of the Bulletin as being different from those seen previously. Members suffering from tunnel vision or kainophobia may be upset at the change. Those who have already lived through the Association's changes of name, constitution, newsletter title, etc. will probably cope. However, a few words seem in order, lest any member be engulfed by an identity crisis.

There has never been an official logo for the Association. At various times individual members have felt the need to produce a logo or emblem for use on such things as conference programmes. A number of such emblems have been used over the years and each has been appropriate for its occasion. However, none has achieved official status or the de facto recognition of sustained usage. These comments may well apply to the logo used for this publication as much as the previous ones.

Surely the time has come for the A.A.M.M. to come to terms with itself on this important issue. A generally-accepted logo would be most useful for stationery, programmes, ties, blazers, cap badges, etc. Members are invited to send any comments on the present logo, any past ones or any suggestions for alternatives to the editor. The matter will be reviewed in future issues of the Bulletin and perhaps finally put to the membership at an A.G.M.

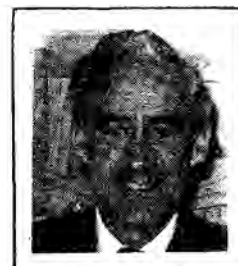
AUSTRALIAN ASSOCIATION OF MUSCULOSKELETAL MEDICINE

OFFICE-BEARERS 1985

The following members were elected to office at the annual general meeting in Melbourne on 25th November, 1984.

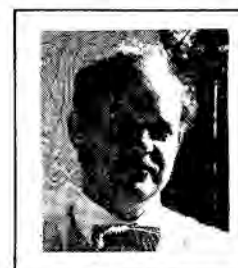
PRESIDENT:

Dr. Conrad Winer LLB, MB, BS, MRCS, LRCP, DRCOG, DPRM, FACRM, MLCO, MRO.
149 Macquarie Street, Sydney, NSW, 2000
telephone (02) 27 8926



HON. SECRETARY:

Dr. David Vivian MB, BS
441 Bay Street, Brighton, Vic., 3186
telephone (03) 596 7211



HON. TREASURER:

Dr. Alex Ganora MB, BS, FRACGP, DPRM, FACRM
72 Phillip Street, Thirroul, NSW, 2515
telephone (042) 67 2811



COMMITTEE MEMBERS:

Dr. Nikolai Bogduk	Brisbane, Qld.	(07) 377 2702
Dr. Bunt Burnell	Adelaide, S.A.	(08) 45 0222
Dr. Clive Kenna	Melbourne, Vic.	(03) 568 8166
Dr. Wade King	Tamworth, NSW.	(067) 66 6166
Dr. Goff Nelson	Canberra, ACT.	(062) 95 6773
Dr. Jeffrey Phillips	Toowoomba, Qld.	(076) 38 4800
Dr. Vern Vivian	Point Lonsdale, Vic.	(052) 52 2009

STATE REPRESENTATIVES:

ACT:	Dr. Goff Nelson	(062) 95 6773
NSW:	Dr. Wade King Dr. Howard Rivett	(067) 66 6166 (02) 439 1335
NT:	Dr. Paul Condon	
QLD:	Dr. Gordon Byth Dr. Jeffrey Phillips	(07) 391 5049 (076) 38 4800
SA:	Dr. Norm Broadhurst Dr. Bunt Burnell	(08) 278 4139 (08) 45 0222
TAS:	Dr. Roger Bodley Dr. Gordon Rich	
VIC:	Dr. John Piesse Dr. David Vivian	(03) 890 0549 (03) 596 7211
WA:	Dr. Harry Moore	(09) 322 5864

Editorial

Welcome to the A.A.M.M. Bulletin.

This publication supercedes the A.A.M.M. Newsletter and is intended to contain the sort of Association news and information for members previously found there plus an increased amount of other material in the form of articles, reviews and reports from sources inside and outside the Association. Members of several years' standing will perhaps see the Bulletin as marking another step in the development of the A.A.M.M. from the modest beginnings of thirteen years ago. Newer members will not be so aware of the progress achieved. It will seem natural to them that the Association they have known over the last few years should produce a publication which reflects its purpose and vigour.

The Bulletin in this form is really the brain-child of Dr. John Bosler, who was President of the A.A.M.M. from 1979 until 1984. In his report to the annual general meeting in November 1984, as retiring President, John made several excellent suggestions for the future of the Association. One was that the heavy workload of the Hon. Secretary (an office filled tirelessly for eleven years to that date by Dr. Conrad Winer) should be shared and in particular that the Secretary should be relieved of the editing of the newsletter. John also suggested that the newsletter be upgraded from a roneo-ed typescript to a more substantial publication and he suggested the name A.A.M.M. Bulletin. All these suggestions were endorsed by the meeting and the result is what you have before you.

It is hoped that members will be pleased with the Bulletin, but not satisfied. This first issue of the new series could possibly be the last, unless members support it with their contributions. Your assistance is earnestly sought to make the future of this publication a success.

The field of musculoskeletal medicine is one in which there is much yet to be discovered and much new information to be shared. In many ways musculoskeletal medicine now is in a similar position to that of general medicine a hundred years ago. It has come out of a dark age of dogma and mystery when a great deal was known by very few and very little was known by the majority of medical practitioners. Now we find ourselves in a new age of scientific enlightenment, when what we do is based on proven anatomy, physiology, biochemistry and pathology. New developments in these fields give us new insights into clinical problems and their management. What may have been considered by some the fringe of medicine years ago is now a frontier and that frontier is being rapidly pushed forward by practitioners of musculoskeletal medicine.

We hear frequently of new investigative methods, new physical treatments, new drugs, new applications of older treatment modalities, new theories, even new evidence for old theories. All these need to be evaluated and the information so gained needs to be disseminated for the benefit of all. Much of this evaluation can be achieved by clinical research and some members of the A.A.M.M. are already active in this area. It behoves us all to consider what we are doing, why we are doing it and how we are doing it, then to share our findings with others. There is little place now for subjective or anecdotal conclusions but there is a great and growing need for objective evidence based on properly constructed trials and studies. The Bulletin will welcome all contributions of this nature, be they major articles or brief reports. It will also welcome product reviews, case reports, letters to the editor and readers' comments on any material already published or, for that matter, on any subject considered relevant to members' interests. This is your Bulletin: support it with your contributions and it, like the Association, will grow from strength to strength.

The editor wishes to acknowledge the assistance already provided by contributors and advertisers, and in particular the support of Ciba-Geigy Australia Ltd. and Regional-Willows Health Care Group, for the publication of this issue.

From the Secretary's Desk



Life since the November conference has indeed been considerably easier. Now that the Clayton's summer has waned, it's time to put pen to paper again. Today, in Melbourne, the English are playing cricket at the M.C.G. and it is freezing.

Bruce Kinloch, Clive Kenna, John Murtagh, John Piesse and myself, with early advice from Les Koadlow, began thinking about the conference in November, 1983. We certainly needed a year to organise it. Initially we attempted to lure Gregory Grieve, author of that large book "Common Vertebral Joint Problems", out to Melbourne, but he was unable to attend. John Murtagh mentioned that James Fisk was an excellent speaker, so we were pleased when he accepted. He later thoroughly justified John's opinion.

The conference ran fairly smoothly. So did the boat trip on the Saturday night, when a lot of us Melbournians had our first good look at our majestic and very blue Yarra River.

After the conference, fifty people enjoyed three days of manipulative lectures and demonstrations from Robert Burns. He will be back at this year's conference, giving a more advanced class.

I was interested to see the issue of repetitive strain injuries raised at the conference. It is indeed a hot topic and over the next few years we are going to have to come up with some new thoughts on this syndrome. Much of the correspondence to journals has been along the lines of "I don't believe it", pointing to the lack of objectivity in its diagnosis, or the opposite. I only have two patients with a R.S.I. type problem and both of them have their pain both in the neck and in the arm. They are both kept at their respective enterprises, one a chef and the other with computers, by occasional treatment of their individual neck problems only.

It was also of interest to hear James Fisk relate that before the National Compensation Scheme was introduced in New Zealand about half of his patients could relate a specific incident to the onset of pain, whereas today all relate a specific incident.

A.A.M.M. ROLL OF HONOUR

The following members have held executive office in the Association since its formation in 1971:

PRESIDENTS:

Dr. Frank May	1971 - 73
Dr. Brian Corrigan	1974 - 76
Dr. Bunt Burnell	1977 - 78
Dr. Gordon Byth	1979
Dr. John Bosler	1980 - 84

HON. SECRETARIES:

Dr. Gordon Byth	1971 - 72
Dr. Murray Ingpen	1973
Dr. Conrad Winer	1974 - 84

TREASURERS:

Dr. John Livingston	1971 - 74
Dr. A. (Kitch) Kitchener-Smith	1975 - 76
Dr. M. (Toby) Arnold	1977 - 78
Dr. Alex Ganora	1979 - 85

Present office-bearers are listed on Page 5

The 1985 annual conference promises to be one of the best yet, with the usual stimulating lectures, discussions, practical sessions and social gatherings plus excellent recreational facilities and superb cuisine in a tropical island setting. Members may be forgiven for being a little confused about where all this will take place. The conference is to be a combined meeting of the Australian and New Zealand associations, called the South-west Pacific Conference on Musculoskeletal Medicine. Originally it was planned for the Club Med resort of Noumea, New Caledonia. However, when the inhabitants there began to resolve their differences with gunfire, the organisers thought a more peaceful atmosphere might be more conducive to the type of meeting they had in mind. Negotiations with Club Med resulted in a change of venue to the newly re-developed Club Med facility on the island of Moorea, Tahiti. The population there is known to be peaceful and is strongly suspected of being friendly as well (ref. Captains Cook, Bligh, et al.).

The change of venue has meant that some other details may have to be altered too. The conference is planned for a week in October but exact dates cannot be determined until accommodation requirements and flight times are clarified. A returnable slip is enclosed with this Bulletin to assist with those aspects of organisation (see Meetings, Conferences and Courses).

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The Secretary of the F.I.M.M. reports that our own Nik Bogduk, of the University of Queensland, anatomist extraordinary and doyen of the conference circuit, has been nominated for the prestigious Waghemacker Prize, a triennial award for the author of the best paper read at a general congress of the F.I.M.M. The papers will be judged at the Congress in Madrid in 1986 and the prize will be awarded to the successful nominee in 1987.

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An assembly of representatives from each of the member associations of the F.I.M.M. will be held in Baden-Baden, West Germany, on 11th October, 1985. It will be followed by a meeting of the F.I.M.M. Scientific Committee. Then on 12th October, 1985, a group of thirty-six experts in musculoskeletal medicine from all over the world will gather in a monastery near Baden-Baden for a week of intensive discussions on hyperextension injuries of the cervical spine. These meetings are by invitation only, and our President has been honoured with an invitation. The possibility of a clash of dates with the A.A.M.M. annual conference places him on the horns of a Presidential dilemma which so far has been only slightly blunted by the uncertainties arising from the New Caledonian troubles. The chain of office must feel particularly heavy at the moment.

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Overseas lecturers invited to Australia in the next twelve months include Professor Vladimir Janda, Dr. Hans Schmid, Professor Rene Cailliet and Dr. Karel Lewit.

Professor Vladimir Janda, of Prague, will be here from June to September for further lectures and demonstrations of his muscle techniques. This will be the last of a series of annual visits and those wishing to hear him should not miss the opportunity to do so.

Dr. Hans Schmid, of Berne, is Director of the Department of Physical Medicine in a large Swiss teaching hospital. He is also the Treasurer of the F.I.M.M. He will be here in August - September to speak about his recent work on sacro-iliac joint problems and other aspects of musculoskeletal medicine.

Professor Rene Cailliet needs little introduction as most members will be familiar with his books on musculoskeletal topics. As Professor of Rehabilitative Medicine at the University of Southern California, Los Angeles, he is an authority many will look forward to hearing. His visit is planned for February, 1986.

Dr. Karel Lewit comes, like his colleague Professor Janda, from Prague. He is an acknowledged expert in his own right on muscle dysfunction and related problems. He will be here in February - March, 1986.

All of these visitors will be speaking at meetings and some will give brief courses whilst they are in Australia. Dates and venues of their engagements will be published in the Bulletin as soon as details are finalised.

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All members should have received copies of the current membership list, arranged geographically. The Treasurer, as Keeper of the Rolls, would like to hear of any corrections, changes of address, etc. so that the list may be kept up to date. Members seeking extra copies of the list may apply to the aforementioned Keeper, whose address is below.

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Subscriptions for 1985 are now due. The rate has not risen above the paltry \$15 levied since 1977. It would be of great assistance if members could send a cheque for this amount, made out to A.A.M.M., together with some means of identification (a "with compliments" slip or letterhead marked "subs" would suffice) to the Treasurer, A.A.M.M., 72 Phillip Street, Thirroul, NSW, 2515.

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New members are always welcome. If you have colleagues who have expressed interest in musculoskeletal topics, why not share this Bulletin with them? You might also care to send their addresses to the Treasurer: membership application forms will be speedily dispatched.

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Great things are happening on the musculoskeletal scene in South Australia. Six members, including state reps. Norm Broadhurst and Bunt Burnell, met on 31st January, 1985, to activate the S.A. branch of the Association. They decided to conduct a membership drive and after placing a notice in the College of G.P.'s S.A. Newsletter were able to enrol twenty doctors in the local group. Regular meetings are under weigh and courses are to begin soon. Liaison with the locally-strong group of the M.T.A.A. (Adelaide is, of course, the home of Geoffrey Maitland) has brought an enthusiastic response and combined activities are planned for later in the year.

Perhaps the rest of us should go and eat crow!

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The Hon.Sec., **David Vivian**, has been involved in the establishment of a multi-disciplinary clinic in Melbourne where practitioners of orthopaedic medicine, sports medicine, manipulative therapy, osteopathy and orthopaedic surgery can work together to provide a team approach for patients with musculoskeletal problems. Professionals with other qualifications are being recruited to expand the team's range of skills. No doubt developments at the Brighton Spinal and Sports Medicine Clinic will be watched with interest by other members of the Association.

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Our man in Western Australia, Harry Moore, reports that his activities have been interrupted by a clinical trial of the patient's role in medical care. Now recovering from an operation, he is planning a trip to the U.K. later in the year to attend a meeting organised by the London College of Osteopathy, of which he is a graduate.

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The Committee on Education and Research has been working on ways of facilitating the teaching of musculoskeletal medicine. The task is made more challenging by the diversity of views and the multiplicity of techniques favoured by different practitioners and by the rapid movement of the research frontier. A tentative syllabus for an introductory course (or set of courses) on musculoskeletal medicine has been put together and will be discussed at the next meeting of the committee. Members wishing to make suggestions or comments are encouraged to send them to the President (as convenor of the committee) and/or to the editor for publication in the Bulletin.

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A transcript of the entire Back Pain 1984 Conference is in preparation and will be published in April, 1985. Many who attended the conference have already made advance purchases of the proceedings. Anyone else interested can obtain a transcript by sending \$20 (cheques made out to A.A.M.M.) to the Secretary, A.A.M.M., 441 Bay Street, Brighton, Victoria, 3186.

□ □ □

The Arthritis Foundation has for sale proceedings of two professional seminars, one on Repetition Strain Injuries (55 pp.) and the other on Back Pain and other Strains (48pp.). These are available for \$10 each, including postage, from the Education Co-ordinator, Arthritis Foundation of Australia (NSW), 12th Floor, 291 George Street, Sydney, NSW, 2000.





MEETINGS, CONFERENCES AND COURSES

Regular meetings are held in a number of centres around Australia for local members to come together and discuss matters of common interest. Some of these groups conduct courses, both introductory and more advanced, from time to time. Others focus their activities on case discussions, exchanges of techniques and the like. Groups are known to be meeting regularly in Adelaide, Melbourne, Sydney and Tamworth. If you are involved in, or know of, a group meeting elsewhere, please communicate with the editor so we can all share in the secret.

In **Adelaide**, regular meetings are conducted by the South Australian branch of the Association and the next is to be held at 8p.m. on Tuesday 23rd April at 4a Byron Street, Glenelg. Courses planned include an introductory course in May at the Department of Physical Medicine, Queen Elizabeth Hospital, and a correspondence course sponsored jointly by the A.A.M.M. and the College of G.P.'s. Enquiries should be directed to Dr. Norm Broadhurst, telephone (08) 295 1890.

In **Melbourne**, members meet at different locations for discussions, practical sessions and courses. The person to contact for more information is Dr. David Vivian on (03) 596 7211.

The next course to be run in Melbourne will be an introduction to joint mobilisation. Dates are 30th and 31st March and 13th April at the College of G.P.'s building, "Trawalla", Lascelles Avenue, Toorak. For details, contact the College on (03) 240 8671.

In **Sydney**, meetings are held at 7.30p.m. on the third Monday of each month in the Department of Rehabilitation Medicine, Royal Prince Alfred Hospital. These meetings are designed as practical sessions for those who have attended the introductory course in spinal manipulation. Those wishing to attend are asked to telephone Dr. Conrad Winer on (02) 27 8926 during the preceding three working days to confirm the arrangement.

The next Coppleson Institute introductory course in spinal manipulation will begin on Monday 19th August, 1985. Enquiries should be directed to Miss Licitis at the Coppleson Postgraduate Medical Institute, University of Sydney, telephone (02) 692 3526.

The Arthritis Foundation of Australia is holding a seminar for health professionals on "Evaluating Outcomes of Therapy" from 9a.m. to 5p.m. on Saturday 30th March at Royal North Shore Hospital, Sydney. Sessions will include lectures on setting up clinical evaluation studies and discussion of studies actually being undertaken. The sample studies will be concerned with therapies relating to arthritis but the principles to be outlined will be applicable to any therapeutic evaluation. Keynote speaker will be Professor Peter Tugwell of McMaster University, Ontario. All interested in clinical research are invited to attend. Cost for the day will be \$40. Registration forms can be obtained from the Arthritis Foundation, 12th Floor, 291 George Street, Sydney, 2000, telephone (02) 29 5271 or 290 3024.

In **Tamworth**, meetings are held at 5p.m. each Thursday in the Outpatients Department of Tamworth Base Hospital. An introductory course in musculoskeletal medicine, with emphasis on spinal and peripheral joint mobilisation and manipulation, is being conducted over a period of twelve months. Further information can be obtained by contacting Dr. Wade King, telephone (067) 66 6166.



see you in...



Tahiti

The annual conference of the Australian Association of Musculoskeletal Medicine will be held this year as a combined meeting with the New Zealand Association of Musculoskeletal Medicine. Designated the South-west Pacific Conference on Musculoskeletal Medicine, the joint meeting (sic) will be conducted at the Club Med village on the island of Moorea, Tahiti. The programme will be spread over a week in October, 1985, with scientific meetings interspersed with less formal sessions and free time for participants to enjoy the Tahitian lifestyle. This promises to be a conference to remember, with abundant opportunities for education, social contact and recreation in one of the world's most beautiful places.

For those able to stay a few days longer on Moorea, a post-conference course on manipulative techniques will be conducted by Dr. Robert Burns of the U.K.

The fine-tuning of the conference arrangements may mean that final dates and some details vary slightly from those sent to members recently by Club Med. In particular, it is hoped that a more favourable cost can be negotiated on a group basis. Those involved with the arrangements would be assisted greatly by some indication of numbers likely to attend. Although the conference is still some six months away, it would be appreciated if you could return the enclosed slip to the President, preferably within a week, indicating your likelihood of being able to attend.

Further details, including dates and costs, will be published in the next issue of the Bulletin.



Madrid

The next tri-ennial congress of the F.I.M.M. (International Federation of Manual Medicine, with which A.A.M.M. is affiliated) will be held in Madrid on 24th to 28th June, 1986. For members able to travel to Spain, this will be another experience not to be missed.

8. INTERNATIONALER KONGRESS
8th INTERNATIONAL CONGRESS
8ème CONGRES INTERNATIONAL



FIMM Fédération Internationale de Médecine Manuelle Madrid 24.-28.6.1986



ILLAWARRA REHABILITATION CENTRE

OCCUPATIONAL HEALTH UNITS
PROVIDE SPECIALISED CARE



New South Wales now boasts two specialised occupational health units, dedicated to the acute and post-acute physical rehabilitation of patients suffering from work-related injuries and diseases, sports injuries and other musculoskeletal disorders.

They are -

- **The Illawarra Rehabilitation Centre**, a 63-bed facility at Thirroul, near Wollongong. The Centre is a private hospital registered under the Workers' Compensation Act as an approved institution for medical and vocational rehabilitation for both in-patient and out-patient services.
- **The Bankstown Occupational Health Service**, located in a fully-equipped clinic building at 400 Chapel Road, Bankstown, and operating as an extension of the IRC's services.

For further information on the services and facilities available please contact the Administrative Director, Mr. Phil King, Illawarra Rehabilitation Centre, 72 Phillip Street, Thirroul, N.S.W. 2515. Tel: (042) 67 2811.



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REHABILITATION
CENTRE

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MAIL BAG Letters to the editor

"I had written him a letter....."



Tennis elbow, golfer's elbow, periostitis and P.S.P.'s

Dear Sir,

From time to time in my practice in physical medicine I have referred to me, by colleagues, patients suffering from tennis elbow or golfer's elbow which has not responded to the usual treatment, being infiltration of the area with local anaesthetic and corticosteroid. It is my opinion that manipulation of the elbow itself is often unrewarding, particularly if the elbow has been subject to invasion on a number of previous occasions. I fully appreciate that benefit can be derived from appropriate mobilising and manipulation of the cervical and upper thoracic spine, but this is seldom sufficient.

I have therefore employed for some years a technique for cases which are resistant to other treatment. It is virtually a sub-periosteal acupuncture or aqua-puncture. The point of maximum tenderness is just infiltrated with 1% lignocaine. Then, using a 2ml syringe with a 25g $\frac{3}{8}$ (0.50 x 16mm) needle, the technique is to inject a small quantity of corticosteroid beneath the periosteum. The needle tip is introduced right into the bone and a few drops of steroid infiltrated into and underneath the periosteum. Multiple punctures, say up to ten, are made together with a small quantity of steroid injected at each.

This is followed by the usual severe pain, sometimes for a day or two, associated with corticosteroid injections. Rest and ice packs, together with analgesics, can be very helpful at this stage. I always advise a patient very strongly to reduce vigorous activities, whatever they might be, as much as possible for at least eight weeks and then to resume very slowly.

This technique has been helpful in, I would say, at least 80% of resistant cases. It can be repeated if necessary after three weeks.

A most interesting sequel to this is that I have found what I consider to be a similar pathological state of periostitis in many patients when examining posterior processes of the spine. One outstanding case involving the lumbar spine had been treated for at least eighteen months by many orthopaedic specialists, at numerous attendances with examinations and x-rays which all proved negative. The patient was a man aged 34 who fell backwards onto frozen carcasses at an abattoirs. He had even been fitted with a Taylor brace which he wore when he suffered severe exacerbations of back pain. Examination revealed normal mobility in all directions, normal straight leg raising and normal reflexes but on pressure over the posterior spinous process of his second lumbar vertebra he immediately experienced severe pain which radiated transversely and down to his buttocks. This exacerbation was typical of the pain which he had experienced all along and which usually lasted for two or three days, rendering him unfit for work. He was well motivated and I consider not suffering from

"compensitis". I considered he had a periostitis of the L2 p.s.p. and I treated this in the manner described. I followed him up for three months afterwards and after initial pain for a day or two he settled down and had no further pain. He does not wear his brace now and is symptom free. As I was the only practitioner who had helped him, he promised faithfully to report any exacerbation and I have not heard from him for over twelve months.

I feel this technique has something very definite to offer in the treatment of periostitis of the nature described, not only in the elbow but also in the spine and elsewhere. I have used it as well in the regions of the ilium and sacro-iliac joints. It could also be considered in association with the needling techniques suggested by Bunt Burnell of Adelaide.

Yours faithfully,

(Dr.) John Whitehouse
Springwood, N.S.W. 2777

Solidarity with physios needed.

Dear Sir,

It is a known fact that many physiotherapists have antagonistic feelings about doctors practising physical medicine and especially using electrical machines in treating musculoskeletal conditions. Some physiotherapists who have acted as lecturers and teachers in mobilising and manipulative courses have been criticized by other physiotherapists.

On the other hand it cannot be denied that many doctors are not capable of carrying out an adequate physical examination and are unable to make a competent diagnosis of musculoskeletal problems. A consequence of that is that they are unable to understand or to direct future management of their patients and also do not understand or know the special skills of physiotherapists. A further consequence is that these patients tend to drift to practitioners of other disciplines, for example, chiropractors, osteopaths, lay manipulators and even poorly trained physiotherapists. I wish to make a point that physiotherapists should actively participate in spreading their knowledge of musculoskeletal examination, diagnosis and management to as many medical practitioners as possible, particularly those engaged in first contact management.

Busy first contact medical practitioners would not have time to indulge in treatment but with knowledge would know whom to refer patients to and if the physiotherapists have exposed their expertise to these doctors the referrals would most likely be to those physiotherapists skilled in musculoskeletal conditions.

Yours faithfully,

(Dr.) V.G. Vivian
Queenscliff, Vic. 3225

THE AUSTRALIAN SPINAL RESEARCH SOCIETY

Nikolai Bogduk

Department of Anatomy, University of Queensland, St. Lucia 4067

and

The Pain Clinic, Princess Alexandra Hospital, Brisbane

At the Annual Scientific Meeting of the Anatomical Society of Australia and New Zealand in 1983, a symposium was held on "The Spine" in order to publicise the research work being done on the vertebral column by Australian anatomists. Following this symposium a meeting was held at which it was decided that there were so many people engaged in spinal research in Australia that the foundation of an independent society was justified. This was achieved, with the inaugural meeting of the Society being held in Adelaide in February, 1985.

Although affiliate membership is welcomed, regular membership of the Society is restricted to persons actively engaged in spinal research. The reason for this is that the intention is not to provide yet another forum for partisan propaganda or re-iteration of dogma, but to maintain a respectable organisation dealing with scientific research and run by experts who have achieved recognition by peer review in the form of international research publications.

The Society further differs from others in that its intended activities are not be a forum for the presentation of esoteric research, but instead to provide up-to-date didactic synopses of the results of research into various aspects of the vertebral column. Additionally, the Society offers to be a consultative body, encouraging and advising anyone who wishes to undertake spinal research.

It is notable that since the mid 1970's a substantial number of research papers have appeared from Australian institutions, and indeed, it could be argued that, if not on a per capita basis, then certainly per research dollar, Australia has become the most productive geographic centre in spinal research. It is then the further purpose of this review to describe the activities of the Australian Spinal Research Society, both in a personal and social sense, and to draw attention to its publications that might be of interest to the reader.

GEOGRAPHY

The main centres of activity in Australia are Perth and Brisbane, and to a lesser extent Sydney and Adelaide. In Perth, the institutions are the University of Western Australia and the Western Australian Institute of Technology. In Brisbane, they are the Departments of Physiotherapy and Anatomy at the University of Queensland. The activities in Sydney and Adelaide are sustained by two postgraduate students in Anatomy and Radiology respectively.

ADELAIDE

In Adelaide, Mr. David Worth, a qualified physiotherapist and member of the Manipulative Therapists' Association of Australia, has been working towards his Ph.D. in Radiology. His interests focus on the movements of the cervical spine. To clinicians, his work at this stage may seem esoteric, but it is integral to the further advancement of this field. One must realise that for any diagnostic technique to be established, somebody must undertake the comparatively boring task of amassing normative data and evaluating the reliability of the technical procedure. This has been David's service.

Many techniques have been used to determine the range of movement of the neck, but most have been fraught with inaccuracies or limitations. David has developed a technique whereby ranges of movement in the sagittal plane can be accurately and reliably measured from radiographs. It was tested originally in cadavers and then shown to be acceptably accurate when applied to living subjects.

Ranges of movement for all segments of the cervical spine, including accessory movements, have now been determined in some 50 normal subjects over several age ranges. Using this normative data, David has now ventured to compare the mechanical behaviour of the

cervical segments in patients with whiplash injury. Preliminary reports of his work are available in various local publications (69-61).

Another exciting prospect is that, whereas David has focussed on ranges of movement, abnormalities in the neck can be revealed by studying the location and displacement of centropoints of sagittal rotation, and this issue is presently being investigated in Queensland in collaboration with David and using his valuable collection of flexion-extension views of normal patients.

SYDNEY

In Sydney, Mr. Fernando Valencia's work is another example of essential normative research. For his M.Sc., Fernando studied the anatomy and electromyography of the lumbar multifidus muscle.

Although it is accepted clinically that spasm of the back muscles can be diagnosed, from a scientific perspective, there have been no studies that have demonstrated the normal activity of the lumbar multifidus, so it is impossible to state whether a given degree of activity is excessive, and therefore pathological or not.

In collaboration with the Queensland group, Fernando established the normal anatomy of the lumbar multifidus, demonstrating that it is consisted of five bands, emanating one from each of the lumbar spinous processes. These anatomical studies enabled him to describe suitable insertion points for fine-wire EMG electrodes into each of these bands. Since each band is unisegmentally innervated, it was possible to study the segmental behaviour of the muscle in various postures and manoeuvres. Fernando found that there were no segmental differences and the muscle acted homogeneously at all levels from L1 to L5, but the greater value of his study was more implicit. By studying some 20 normal subjects, he amassed a body of valuable normative data. His work now permits the study of symptomatic patients to determine whether or not patients with low back pain do exhibit statistically significant muscular abnormalities such as sustained spasm, hyperactivity during movement, or inco-ordination during movement.

In a further sense, there is currently much interest in "muscle energy" and postural techniques of treating low back pain, and Fernando's work now permits such techniques to be evaluated or corroborated electromyographically.

Fernando's anatomical studies are being prepared for a paper in "Spine" while his EMG studies are soon to appear in "Electromyography".

PERTH

Dr. Jim Taylor came to Australia with a background

of research into the development of the vertebral column (40). As Senior Lecturer in Anatomy at the University of Western Australia, Jim continued his work on scoliosis. His studies on the embryology of the vertebral column enabled him to formulate an explanation for idiopathic scoliosis on the basis of asymmetrical development of the vertebral arches secondary to the adequacy of segmental blood supply (42,43,47). Not restricting himself to the embryo and foetus, Jim has been involved in epidemiological studies of scoliosis (41,43,44).

Jim's further contributions have come from the students he has attracted. Linton Giles gained his M.Sc (Qualifying) and M.Sc. through work on the lumbar zygapophysial joints, demonstrating that low back pain and zygapophysial asymmetries correlated with leg-length inequalities (33-35). Linton also studied lumbar zygapophysial menisci (36), and he is now continuing towards a Ph.D. degree on degenerative changes in the lumbar zygapophysial joints and the innervation of zygapophysial menisci.

Dr. Lance Twomey is head of the Department of Physiotherapy at the Western Australian Institute of Technology. Returning to further study after graduating as a physiotherapist, Lance gained first his B.Sc (Hons) in Anatomy and then his Ph.D., the latter under Jim Taylor. Together, Lance and Jim have worked on the anatomy, biomechanics and age changes in the lumbar spine. Studying some 200 cadaveric lumbar spines they determined the range of movement of these spines, correlating this with age, and comparing it with ranges obtained from living subjects, and establishing the role played by posterior elements in limiting range of movement (45,48-50,52-58). They have also measured the physical properties of creep and hysteresis in the lumbar spine and their changes with age (51). Their most striking revelation has been that, contrary to popular belief, intervertebral discs do not lose height with age! Loss of trunk height, is in fact, due to osteoporosis and the loss of transverse trabeculae allowing vertebral bodies to deform (52,53,55,57,58). Lance has also been involved in a successful study of manipulative therapy that demonstrated that manipulative therapy results in a significantly faster resolution of symptoms when compared to control treatment (32).

Most recently, Jim and Lance have been addressing the age changes in lumbar zygapophysial joints. Their work has revealed that the curvature of the plane of these joints significantly affects the pattern of age or degenerative changes in these joints. Dorsally, each superior articular process faces medially, to resist rotation, but ventrally the surface faces dorsally to resist flexion. It is the ventral part of the joint, the part that resists flexion, that undergoes earlier and more pronounced degenerative changes (47,58).

BRISBANE

Brisbane is the location of several spinal researchers. In the Department of Anatomy at the University of Queensland, Mr. Vaughan Kippers is concluding his Ph.D. studies on the movements of the lumbar spine. His work focuses on the electromyography of erector spinae, the relationships between vertebral, trunk and hip movement, and the basis of electromyographic silence towards the end of trunk flexion (38,39). Of particular relevance has been his determination of the relative contributions of hip and vertebral flexion to forward bending and the invalidation of the stoop test as a measure of vertebral flexion (37). His recent review of the electromyography of back muscles brings together many points of physiological and ergonomic interest for clinicians dealing with spinal posture and movement (39).

Other work in the Department of Anatomy centres on my own section. For her M.Sc., Miss Janet Macintosh has been studying the detailed anatomy of the lumbar erector spinae and the thoracolumbar fascia. Work on the thoracolumbar fascia has been published (28) and deals with the capacity of this hitherto ignored structure to act passively and dynamically as a ligament to withstand flexion of the lumbar spine; a study contributing to the resolution of the controversy concerning abdominal bracing and balloon mechanisms during spinal flexion. Her other work, now nearing completion, concerns the disposition and action of every fascicle in the lumbar back muscles. This apparently esoteric work has eminent application in computer models of the lumbar spine being developed in Canada, and in the interpretation of the role of various parts of the back muscles in various postures and movements.

My own work has focussed on the innervation of the vertebral column and the interpretation and diagnosis of spinal pain. Studies of the innervation of the lumbar spine should now be familiar to members of the AAMM (13,21,29,30), as should be their clinical applications (2-7,26,27). Other work, presented at meetings of the AAMM, on the zygapophysial menisci, has now been published (24,31), and has now been followed by theoretical considerations of the pathology of acute locked back (25).

Studies of the innervation of the cervical spine, including clinical applications, have been published (10), and most recently, two B.Sc (Med) students determined the nerve supply of the cervical intervertebral discs. Although a major publication of this work is still being prepared, it has been presented to the Anatomical

Society of Australia and New Zealand, and later in the year, it will be presented to the International Congress of Anatomists. The clinical significance of these findings are described in clinical papers that would be of interest to practitioners (18-20).

The most important application of our work on the innervation of the cervical spine has been the development of cervical medial branch blocks (10). Using these techniques at the Pain Clinic at Princess Alexandra Hospital we have been systematically studying patients with cervical pain and headache. With respect to cervical pain we have demonstrated a high incidence of pain arising from the cervical zygapophysial joints, while with respect to headache we have revealed a high incidence of pain mediated by the third occipital nerve and stemming from the C2-3 zygapophysial joint. Publications reporting the results of this work are presently in preparation. Conjoint studies between the Departments of Anatomy and Physiotherapy involve myself and Miss Gwen Jull, Lecturer in the Department of Physiotherapy and manipulative therapist. In a study to correlate the results of diagnostic blocks with manual examination, Gwen has been examining our patients with cervical pain and headache under single-blind conditions, and our results apart from validating the accuracy of manual diagnosis have enabled us to define the pathognomonic features of a pain producing joint. This work, too, is presently in preparation for publication.

Aside from this primary research work, readers might note two forthcoming review publications that will appear in the Medical Journal of Australia. These deal with the topics of cervical headache (23) and epidural steroids (22). As well, they might be interested in several publications that have derived from educational conferences of the Manipulative Therapists' Association of Australia which address several pertinent, clinical topics (1,5,8,9,11,12,14-17).

CONCLUSION

I apologise if this article seems only a journalistic exercise, but the volume of work that has been generated by the Australian Spinal Research Society defies synopsis in any form short of a book. Instead, I have introduced the individuals and referred to their work, trusting that if the material is of interest, readers may be prompted to refer to the original literature. Moreover, I trust that the AAMM may continue to liaise with the Australian Spinal Research Society and that we can continue to provide a worthwhile service by keeping you abreast of developments in this field.

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A cheerio call to someone selected at random from the membership barrel

This month's lucky member is **Tim Begbie**, who mans one of the far-flung outposts of our empire at Huonville in south-east Tasmania. There he combats the ravages of storm, tempest and musculoskeletal dysfunction among the patients of his rural general practice. Tim has been interested in musculoskeletal medicine for several years and has been a faithful attendee at annual conferences of the Association. Reticent by nature, he is not one of the people you will remember making noises at meetings. He is, however, one of those members spreading the message quietly but effectively among his patients and colleagues by dedicated example. Next time you mainlanders feel oppressed by the heat, think of Tim patiently doing his bit down there for the things we all stand for ... and remember him in your prayers.

TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION (TENS)

PAIN RELIEF - A REALITY OF TODAY.

U.R. Krieser M.I.T. I.E.(Aust). S.M.I.R.E.E.(Aust)

INTRODUCTION.

Volumes have been written on the subject of TENS as a form of pain relief. Many years of experimentation with subcutaneous electrode implantation, and transcutaneous stimulation, have resulted in a scientifically developed portable transcutaneous stimulator that has established itself as an effective tool in the control of pain.

Through education, international symposiums, and numerous seminars throughout Australia, the application of TENS in general practice, in public and private pain clinics, and in physiotherapy has been gathering strength.

It is essential that practitioners, physiotherapists and others involved in patient welfare and rehabilitation, understand the principles, gain confidence and experience in the use of TENS as a treatment modality for their patients.

Ten years of experience with TENS has resulted in the availability of technically advanced machines such as the Agar range, which includes a new unit for the treatment of scoliosis. The units of today have many accessories to simplify treatment and speed up the application of electrodes by supplying reusable self adhesive electrodes and electrode placement charts. With the technology of today, battery life of 200 to 400 hours ensures economical treatment costs. All these features have simplified the treatment and achieved greater acceptance of this modality by the patient and his therapist.

Patients who have benefited from TENS treatment, and whose chronic situation requires frequent use of TENS, are encouraged to purchase their own unit for home use while they remain under regular review by their practitioner. In cases where treatment is required for periods of one to six months, hiring of a TENS unit simplifies short term requirements.

In highlighting the fine work of many experts in the field of pain relief, it is hoped that the identification of the problem, its treatment, and the important results achieved, will indicate in a practical manner the beneficial aspects of the treatment of peripheral neurovascular diseases: reduction in patient analgesic requirements, and an increased recovery rate.

ASSESSMENT OF TREATMENT may be categorized as follows:

- rating 1. **EXCELLENT:** Virtually pain free, with a reduction or abstinence of analgesic medication. Usually increased joint and limb mobility is experienced with improved appetite accompanied by restful sleep.
- rating 2. **GOOD:** Significant pain relief with positive mental and physical attribute improvements.
- rating 3. **FAIR:** Acceptable pain relief with various indicators to reinforce this rating.
- rating 4. **POOR:** Minor to negligible pain relief.

ACUTE AND CHRONIC PAIN SYNDROMES

In treating patients with acute and chronic pain, it is essential that:-

- the correct treatment protocol is followed.
- the stimulator used incorporates modern technological advances.
- the therapist shows a gentle persistence with understanding of the trauma (real or psychological) that the patient and his family has to endure.

TREATMENT PROTOCOL - ELECTRODE PLACEMENT

Initially an electrode placement pattern is chosen along the same dermatome distribution as the pain path. If results after 2 to 3 treatments are not successful, electrode placements are moved proximal to the previous points or at some distance from the suspected dermatome distribution of pain. This trial and error is rewarded when a placement montage is found which gives the patient maximum pain relief. In the majority of cases the first electrode placement will bring the desired result.

The placement of electrodes is a fast operation especially when "reusable" pads are used to attach the electrodes to the area for stimulation. A new product replaces totally the need for gel. Lecpads have hypoallergenic Karaya gum which contours to the skin surface. Stimulation is evenly distributed over the surface, without the development of "hot spots".

PHYSIOLOGICAL CONCEPTS LEADING TO CORRECT TREATMENT PROCEDURE

With constant electrical stimulation (conventional "regular" format) of nerve fibres, the sensory discharge frequency declines. Hence the release of acetylcholine (ACh) at nerve ending receptor sites is inhibited with the patient's response indicating that "no sensation" is being felt. This phenomenon is called "adaptation" to the stimulus.

By utilizing the Pulse-Burst or Modulation technique of TENS adaptation is avoided. These features enable an easier and faster location of the critical point where the balance of low ACh liberation and muscle contraction results in muscle relaxation i.e. fasciculation occurs.

It has been shown conclusively TENS treatment using Pulse-Burst or Modulation is generally effective in 25 mins. of treatment, compared to periods of 1 to 3 hours stimulation with conventional TENS. [7]

RESULTS

The outlined treatment technique was used for a group of 122 chronic patients with aetiologies broadly specified as intractable migraine, post-herpetic neuralgia, cervical spondylosis and chronic idiopathic polyneuropathy.

The following conclusions were drawn from the clinical studies:-

- Experience shows that four weeks of treatment is minimal before overall assessment can be regarded as conclusive.
- 75% of female patients and 87% of male patients achieved results in rating 1.
- Only 20% of females and 11% of males were categorized in rating 4.
- The lowest success rate occurs with chronic back pain (16%) followed by chronic neck pain with (23%). Yet those achieving relief do so in the upper half of the assessment ratings.
- 67% of chronic sufferers have done so for periods up to 2 years, while 64% of patients who have been suffering for periods of 10 years obtained rating 2 to 3 in pain relief.
- Success in rating 1 drops with age in both male and female patients.

Results are shown in the accompanying table.

AGE GROUP	FEMALES	MALES
21-40	100%	93%
41-60	78%	88%
Over 60	60%	73%

- Investigative work into cases that did not respond positively to TENS treatment showed

possible psychological contributing factors, or patients for whom the aetiology of pain was never completely ascertained.

- TENS therapy does not appear to produce any physiological changes other than pain relief. Furthermore, as treatment progresses (measured in weeks or months), dependency on TENS treatment diminishes to the point where 15 to 30 mins. of stimulation may achieve long periods of total pain relief.
- TENS therapy appears to be a valid method of pain management, regardless of aetiology, duration of pain, age, sex or psychological factors. Above all it is biologically safe and its non-invasive nature clearly indicates its use as a "medication dependency" reducing factor, and in some cases the total elimination factor in the use of narcotics and analgesics for the relief of pain.

This impressive work, was performed by Dr. R.L. Stieg [2]. His findings were similar to independent reports by other researchers on 1100 patients.

POST SURGICAL ANALGESIA - A VALID CASE FOR TENS

In a controlled study conducted by Dr. J.G. Bussey and Ms. A. Jackson, who practice general and gastroenterological surgery in Georgia U.S.A., TENS electro-analgesia was used post-operatively on 86 patients of a controlled group of 210 while the balance were treated post-operatively with pain relieving medication in the traditional manner. The TENS group were informed that they may ask for pain relieving medication at any time if required.

Within the control groups there were 135 Cholecystectomies, 75 Inguinal Herniorrhaphies. The age group varied from 15 to 75 years, with an approximate balance between male and female patients. [3]

Surgery followed the patient instruction protocol as outlined. Sterile, pregelled self-adhering electrodes were placed several inches from the incision, and for the full length of the incision. An effort was made to block several nerve segments, thereby stopping pain from the incision and from the contused and bruised muscles that were retracted.

When the patient reached the recovery room the stimulator was connected to the electrodes and switched on. Stimulation was continuous for 48 hours after surgery. Thereafter stimulation was less frequent and used as required.

In a preliminary study of 23 haemophiliac patients with acute haemarthroses, Dr. U. Martinowitz and associates of the National Haemophilia Centre, Tel Aviv,

found that following TENS treatment, joint swelling decreased and the range of joint movement improved. In 19 patients, range of movement increased by 15 degrees and in 9 patients, the circumferential swelling decreased by 1 cm. Treatment usually lasted 30 to 40 minutes and all patients received conventional replacement therapy after the TENS treatment. [10]

ORTHOPAEDIC APPLICATIONS

In both accident and surgery cases, a variety of orthopaedic problems may prevent voluntary use of muscles, either through direct interruption of the nervous pathway or the patient's fear of inducing re-injury or pain with exercise.

In such cases, neuromuscular stimulation can deliberately activate muscles to accomplish therapeutic goals without the patient's voluntary muscular participation. One of the most obvious ways is to prevent muscular atrophy, resulting from enforced immobilization. This could be caused by traction, casting a limb, or simple disuse because of oedema or chronic pain.

In all these cases, TENS treatment is envisaged by allowing "windows" in casts and the placement of electrodes over the appropriate target motor points. Stimulation is repeated at a set schedule to minimize loss of muscular power. This technique is adopted for cases such as fractures, joint repair surgery, joint prostheses, soft tissue trauma and in chronic pain syndromes such as causalgia and post herpetic neuralgia. Some of the major objectives in stimulation can be summarised as:-

- prevention of joint ankylosis.
- improvement of glideability of injured tendons or sheaths.
- increasing the range of limb motion.
- maintenance of post-operative mobility (critical in successful therapy).
- minimization of post-operative deformation.

TENS IN ORTHOPAEDIC SURGICAL APPLICATIONS

In 34 cases of knee surgery studied, K.W. HARVIE D.O. [5] was able to indicate a dramatic improvement in the control of post-operative knee pain with the use of TENS. A breakdown of cases reveals the following statistics:

Total knee replacements	7
Synovectomies	2
Menisectomies	18
Knee arthrotomies	4
Patella plasties	2
Fractures about the joint	3

Following closure of the wound, normal post-operative practice was followed. TENS treatment was

maintained for 4 to 7 days. Extra exercises of the quadriceps in "range of motion" is recommended as per physiotherapy requirements. Narcotic intake was decreased from 75% to 100%, while 5 patients required no post-operative narcotic medication.

Overall effectiveness:

- Straight lifting of leg with minimum of difficulty on day 1 post-operative.
- Ambulation started on day 1 post-operative for some cases, while for the balance, this was achieved on the second post-operative day.
- Knee motion was dramatically improved.
- 4 of the 7 total knee replacement cases were able to gain 80% to 90% of motion, following the removal of the first dressing on the 5th to 6th post-operative day. The remainder achieved this knee motion by the 8th post-operative day.
- Menisectomy cases decreased their hospitalization on the average by 2.5 days.

In two cases, an adverse skin reaction to the tape or gel was noted. This resulted in slight reddening of the stimulated area in one case, and a blister in the second patient. Both reactions were cleared within a week with mild skin cream, while stimulation continued on adjacent sites.

The introduction of gummed pads as a gel replacement and adhesive patches as a tape alternative will minimize skin irritation and result in a comfortable stimulation at any setting.

SPORTS INJURIES

When dealing with sports injuries, TENS lends itself admirably in the recovery phase.

The Modulated and Pulse-Burst waveforms apply periodic low frequency pressure pulses onto the muscle fascia, which in turn transmits the periodic pressure onto blood vessels in the effected area. Thus gentle "pumping action" induces better vascular flow which assists the recovery rate with less pain trauma.

With 22 sportsmen and women selected for treatment, 18 returned to full sports activity following 10 sessions of TENS treatment, while 15 indicated complete pain relief. It became obvious that longer initial TENS therapy, or a greater time interval before returning to full sport activity, may help to avert recurrences.

PHYSICAL THERAPY AND REHABILITATION CENTRES

There are a number of Rehabilitation centres in Australia and overseas, where TENS complements physical therapy and counselling as the major pain combatant.

Pain syndromes categories encountered in a documented study in this area are listed below:-

- migraine headaches.
- bursitis.
- diabetic neuropathy.
- carpal tunnel syndrome.
- tendinitis.
- tennis elbow.
- osteoarthritis and rheumatoid arthritis.
- sciatica.
- phantom pains.

SUMMARY

Objective evaluation of TENS, with its wide ramification in controlling pain and promoting the speedy recovery of the patient, has now been under the "medical fraternity microscope" for a decade. The long-term evaluation of its effectiveness in a wide spectrum of man's afflictions has now reached positive conclusions.

Researchers and physicians from around the world have given their time and effort in ensuring that their recommendations for this form of treatment is based on clinical trials on a multitude of patients and a variety of pain syndromes. All credit must go to these dedicated men and women, whose findings inspire medical electronic research establishments to ensure that their instrumentation incorporates the latest and most effective technology available today.

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Members are re-assured that the 1985 annual conference is to be held on the island of Moorea, Tahiti, not the unrelated atoll of Mururoa. Whilst Mururoa is believed to have excellent facilities for scientific investigation, the climate is considered unsuitable for a quiet chat amongst the palm trees.





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LOW BACK PAIN REHABILITATION - DOES IT WORK?

Alex Ganora

Medical Director, Illawarra Rehabilitation Centre, Thirroul. N.S.W. 2515

Rehabilitation is a process of restoring function, which ideally starts from the onset of illness or injury and which is directed towards the physical, psychological, social, vocational and economic aspects of disability (1,2). This function-oriented process seeks to create a therapeutic environment in which recovery is facilitated.

Clearly, this is a broader concept than merely returning an injured worker to work. Rather, it deals with all aspects of disability, and hence quality of life.

There are many disabling consequences of back injury. (3). These include:

1. Pain, acute and chronic.
2. Muscle weakness and tightness.
3. Joint stiffness, strain and instability.
4. Reduced physical tolerance.
5. Deconditioning and unfit.
6. Anxiety, fear and anger.
7. Depression.
8. Suffering, submissiveness, dependency, inability to cope.
9. Sick-role behaviour.
10. Drug misuse and abuse.
11. Sexual dysfunction.
12. Loss of family status.
13. Loss of working status.
14. "Locked-in" to adversary litigation.

Each of these represents a loss of function.

In the traditional medical model of care, emphasis is placed on cure. The patient need play no active part and loss of function is not considered. Back injury is frequently treated in this way. This approach is incomplete because it stops short of restoring function. The consequences of back injury intrude upon life and cause disability. Disability prevents successful cure.

Therefore, a holistic approach has advantage in integrating pharmacological, surgical, physical, psychosocial and vocational components of patient care, and in having as its goal the restoration of function as well as the elimination of tissue damage.

OBSTACLES TO REHABILITATION:

Numerous obstacles exist which interfere with such an approach to back injury and hence, its effective rehabilitation.

1. The Adversarial System:

The Byrne Report (4) regards the legal adversary system as "not conducive to rehabilitation" and recommends that it be abolished. Adversary litigation represents a significant cause of delay (4,5,6,7) because of the advantages to one or either party, causing justifiable confusion and resentment in an injured worker who is faced with contradictory opinions on attributability and case management. Ison (5) points out the futility of a cause-based system when dealing with a condition which does not result from a single cause, e.g. lifting, but from the interaction of multiple causes, e.g. disc degeneration, biomechanical stresses. "A great deal of acrimonious debate focuses on the significance of the employment event or exposure in relation to other causative factors. The situation places incredible strains on the process of medico-legal interaction".

2. Delays:

Most would agree that rapid rehabilitation is most likely to be effective when implemented early, and that it is more difficult and more costly to restore function when all spheres of performance are lost. Therefore, it is necessary to intervene before the worker has lost his job, before his nerves are shattered, before he is deconditioned by pain and inactivity, and before he consults a lawyer.

A person absent from work due to back injury for 6 months has only a 30-50% chance of returning to work. After 12 months, his chances are only 10-25% and at 2 years, they are negligible (16,17).

The major causes of delay in effective rehabilitation are:

- (a) The adversary system.
- (b) Lack of co-ordination of services.
- (c) Lack of available facilities.

Because no-one has the responsibility for organising and co-ordinating a total rehabilitation process, it is often left to chance or the goodwill of the doctors and employers. Employees, unions, employers, insurers, doctors, solicitors, courts, welfare agencies and

government organisations are operating in isolation, resulting in a lack of common objective.

Industry's experience with rehabilitation of back injury has been a poor one because it has seen the inadequate outcome of late referrals. This is perpetuated by a lack of access to immediate fast-stream industrial/back injury rehabilitation services throughout the nation and by the congested facilities of the Commonwealth Rehabilitation Service which are choked with the chronically disabled.

3. Psychosocial Barriers:

An unco-ordinated, delayed, adversarial system of care provides an environment in which human behaviour is conditioned towards a sick-role. Psychosocial factors are a frequent cause of delayed recovery (15). For patients recovering within 2-8 weeks, tissue damage is the likely source of pain. After a longer period of nociceptive activity, psychological and social factors will modulate pain perception and play a growing role. After 6 months, pain is likely to be 50% dependent on these factors (18) and the clinical picture is one of depression, anxiety, dependency, deconditioning and disability. This disability is reinforced by several factors:

- (a) derivation of income from disability;
- (b) derivation of sympathy from significant people;
- (c) escape of responsibility derived from lost function;
- (d) hostility derived from poor communication.

The longer a person is exposed to such reinforcers, the less likely he is to respond to rehabilitation or to return to work.

4. Occupational Barriers:

The likelihood of returning to work is highly dependent on the continued suitability of the job for the recovering back-injured worker, and the availability of specified alternative duties. Nachemson (16) emphasises **the need** for early return to work after back injury: "A **gradual biomechanically sound return to work activities is in all probability the treatment which will make most patients symptom-free most rapidly**". In this early phase of recovery, work activities must be controlled to avoid heavy **lifting**, to stand close to the work site, avoid bending, **avoid twisting**, to change position frequently, avoid sitting in **low chairs** and to use a lumbar support and arm rests **when sitting**.

Such an early return to work programme cannot be implemented without:

- (a) work conditioning;
- (b) ergonomic analysis and modification;
- (c) on-site work rehabilitation activities,

which require

- (a) availability of alternate duties which are mechanically kind to the back;
- (b) access to the worksite by the ergonomic and rehabilitation team;
- (c) communication and unity of purpose between employer, union, lawyer, worker and treatment team.

Some or all of these factors are often missing.

Other obstacles to rehabilitation have been described by Stone (19) and Edwards (6) and Ison (5) and include rights to common law, unions, level of income payments, free choice of medical aid, unenlightened claims representatives and the loss of earnings system of calculating disability awards.

THE EXPERIENCE OF OTHERS:

Despite these inherent difficulties, the success and benefits of comprehensive back injury rehabilitation have been reported and their methodologies described (3,9-12,20-39).

Cairns and Mooney (22-24) report that back rehabilitation "has much to offer the extremely complex and frustrating problems encountered in the management of chronic low back pain" and report significant improvements in pain and activity levels in 70% of cases with return to work in 42% of cases off work for 1-3 years. They estimate that 60% of the chronically back-injured population can be removed from the health care utilisation system and they, as does Donovan (27), comment on the economic value of such an effort.

In an impressive study, Gottlieb et al (20,21) reported on 72 unemployed disabled back sufferers with a median duration of symptoms of 3 years. 59 of these achieved significant functional improvement at discharge. These 59 had vocational restoration as a goal and 95% achieved it, with 50% still working 1 year later.

That such intensive rehabilitation might bring about long-term benefit even in the chronics is also suggested by Seres et al (25,26) who followed 36 patients for 80 weeks and reported significant improvements in pain levels, flexibility, drug utilisation, dependency and utilisation of medical resources. These improvements were maintained at 18 months.

Spengler (31) reports that although such multidisciplinary efforts are costly, they are cost-effective and can be expected to allow 25-40% of the chronically back disabled to return to work. He states that at the University of Washington, cost-effectiveness is achieved when 1 patient in 20 returns to work. At the obtained rates of return to work, this would imply an economic saving of about \$3 - \$10 for every rehabilitation dollar

spent on chronic cases. When one further considers that rehabilitation expenses form between only 1% and 2% of total claims payouts in 1974-76 (4), the potential savings to the nation by effective rehabilitation can be enormous, even if the yield of salvage of chronic cases is low.

At the Royal South Sydney Hospital, a 10-year back rehabilitation caseload of compensable back injury was reported (28). A notable observation was the consistent relationship between longer times to admission and poorer outcome, with a particularly notable decrement in treatment responsiveness in patients seen more than 8 weeks after injury. Of the 1,279 cases rehabilitated, 65% were able to return to normal duties following a treatment of 3 weeks. In cases presenting later than 8 weeks, only 20-30% returned to normal duties.

In my own experience at the Illawarra Rehabilitation Centre (34) where I reviewed 150 cases of compensable low back injury rehabilitation, 24 out of 28 acute cases (less than 4 weeks) returned to normal duties, and 28 out of 102 chronic cases (more than 3 months, average 2½ years) returned to normal duties. Another 14 returned to selected alternative duties and a further 14 were committed to vocational retraining. This means that more than 50% of chronic compensable low back disability can be vocationally salvaged.

CONCLUSION:

On the basis of these reported results, one can have a justifiably high expectation of good outcome from low back injury rehabilitation.

In virtually all cases, the impact of injury can be lessened. Pain levels, physical function and drug utilisation can be improved and iatrogenic consequences can be minimised. The likelihood of an acute back injury becoming chronic can be significantly reduced by an active approach and return to work status can be anticipated in 50-90% of cases according to duration of symptoms.

The resultant improvements in quality of life, national economic savings and greater productivity remain to be accurately quantitated but are likely to be great.

Rehabilitation after back injury can be highly successful in restoring function and productivity but it must be stressed that the rehabilitative effort must be conducted under favourable conditions. These include:

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1. Early Intervention:

Start at the onset of injury; preferably within 4-8 weeks. After 6 months, it is, at best, a salvage job.

2. Function-Oriented Approach:

- (a) Organic, psychological, social and vocational.
- (b) Define treatment goals according to disability.
- (c) Active treatment requires:
 - (i) no prolonged rest
 - (ii) no inactivity
 - (iii) no work avoidance
 - (iv) no prolonged passive therapies
 - (v) no habit-forming drugs
 - (vi) early return to work
 - (vii) biomechanically controlled activities
 - (viii) rapid reconditioning
 - (ix) removal of psychosocial reinforcers
 - (x) intensive counselling, education, explanation

3. Multidisciplinary, Co-ordinated Approach:

(a) Integrate medical, surgical, pharmacological, physical, biomechanical, functional, psychological, social, occupational and vocational efforts.

(b) A common purpose of action must exist, which requires co-operation and liaison with employers, insurers, lawyers, community health services, unions, workers and occupational health services.

(c) This requires co-ordination and communication.

The Woodhouse Report (8) states "Obviously medical rehabilitation must be available as soon as the illness or handicap is known. But there is a need for attention to be paid to the requirements of the whole man. Social, vocational and educational services should be provided concurrently with, or following closely upon, medical services ... Teamwork is the key in the provision of rehabilitation services; without it, there can be no adequate rehabilitation plan. Rehabilitation services should be: universally available, easily accessible, entirely flexible, comprehensive, continuous and complete. The challenge presented by those basic and essential criteria have not been met in Australia."

This statement was true in 1974. It is still true today.

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AIDS ... in the news again

In the workshop sessions of the 1984 Annual Conference in Melbourne, members will have seen a demonstration of treatment techniques advocated by the New Zealand physiotherapist Robin McKenzie. They will also have seen a display of literature and patient aids associated with the McKenzie concepts.

The display was mounted by Inverell physiotherapist Desie Kearsey and her husband Peter. Desie has several years experience in manual therapy and has been using the McKenzie techniques since first attending one of McKenzie's courses in 1980. She is enthusiastic about her experiences of the techniques and is promoting the aids to enable others to utilise the simple ergonomic principles involved.

Aids demonstrated included the covered foam rubber rolls designed by McKenzie to provide support for cervical and lumbar regions.

The cervical roll is 50cm. long and 10cm. in diameter. It is designed to be inserted inside a pillow slip with the patient's usual pillow, to provide the extra support so often required by patients with neck problems. The ingenuity of the design is in the way the rubber is

constructed to provide what is termed "selective density". This means that support can be increased or decreased according to need simply by turning the roll through 90 degrees.

The lumbar supports are constructed on similar principles but are shorter and thicker. They are made in two grades of firmness. The standard lumbar roll is for use when sitting on any seat which does not provide adequate low back support (and this includes most chairs normally encountered). The heavy density lumbar roll is firmer and of smaller circumference: it is designed specifically for long distance vehicular travel. Both lumbar rolls can be turned to provide "selective density".

Other types of cervical and lumbar support are available but most comparable ones are in the forms of pillows and cushions which are more cumbersome and less versatile.

The McKenzie rolls are effective, well designed to satisfy important ergonomic principles, readily portable and, perhaps surprisingly, inexpensive. Cost to the patient is in the vicinity of \$12. They seem to fill an important need and are highly recommended for members' attention.

NON-ERRATUM:

Page 28, paragraph 4, line 2:

for "outcome" read **"outcome"** as you see it, not "income" as your bank manager would like to see it.

THAT HYPHEN:

Members are reminded that the A.A.M.M. is the Australian Association of Musculoskeletal Medicine, not of Mus-culoskeletal Medicine, Musculoskel-et al Medicine or any other such. Members' attention is drawn to the Constitution. Any future instance of attempting to destroy the good name of the Association, whether by hyphenation or otherwise, will be punishable by excommunication.



THE ORIGINAL McKENZIE LUMBAR ROLL

As described on pages 11-13 of the Book "Treat Your Own Back".

If you suffer from low back pain you should use a Lumbar Roll.

- Specialists treating low back pain have discovered that if you sit incorrectly, the pressure inside the discs in your low back is significantly increased.
- If you slouch when you sit you may develop low back problems.
- If you already have back problems you will perpetuate them if you continue to slouch.
- This roll has been perfected over many years and is designed, when used correctly, to prevent the onset of pain.
- For use in your lounge and office chair or in your car seat, it is important to use the roll correctly.
- "Place your buttocks as far back in the seat as possible. Lean forward and insert the roll horizontally across the low back just above the belt line. Now lean back against the roll so that the hollow in your back is firmly supported."
- Initially this position will feel strange, uncomfortable and in a few instances you may feel pains in a different place. Remember, it will take a few days to adjust to this new position, and you must put up with the new strain for a short time.



- Everyone is slightly different in shape and the roll may have to be moved up or down by NO MORE than one inch.
- Once you have found the best position to place the roll it may be fixed by using a strap or velcro fastenings.

THE McKENZIE LUMBAR ROLL

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SUBMISSION TO THE MEDICAL BENEFITS REVIEW COMMITTEE

A submission has been made to the Medical Benefits Review Committee on behalf of members of the A.A.M.M. It was prepared by Drs. Clive Kenna and John Murtagh, initially as a private submission, but after discussion at the 1984 annual general meeting was endorsed by the Association with some minor amendments.

The submission represents a considerable amount of work by its authors; all members of the Association ought to be grateful to them for their efforts. It is a detailed and hence lengthy document and space does not permit its reproduction in full in these pages. However, its outline is as follows.

The authors begin by establishing the relevance of the submission under the terms of reference of the Review Committee. These include:

1. To consider and make recommendations on whether the current scope of the Medicare arrangements should be extended to provide benefits for certain paramedical services.

2. (i) To classify the descriptions of those items which do not accurately define the precise nature of the services intended to be covered.

- (ix) To re-examine the current referral system and make appropriate recommendations on any changes to be made.

- (x) To consider provision of benefits for medical services not specifically or not fully covered by Medicare benefits at present.

The aim of the submission is stated as recognising that manipulation plays an important role in the treatment of musculoskeletal conditions and that as such it is not adequately covered in the current Medical Benefits Schedule.

The main body of the submission is a discussion of numerous issues, raising points which support this aim. It begins with an evaluation of background factors and the present situation, stressing that spinal manipulation is recognised, used and taught by members of the medical profession. The authors emphasize that manipulation is not a panacea for most of man's ailments but is indicated for the treatment of spinal problems which are mechanical in origin. They state clearly that there are numerous doctors with appropriate qualifications

practising in this field of medicine and acting as a focus of referral for patients requiring this form of treatment.

The issues of paramedical and non-medical manipulations are canvassed, stressing the advantages of a comprehensive medical education in the assessment of patients' problems and the various treatment options. The authors point out the dangers of manipulation when employed by persons without the education and responsibility for whole patient care and/or without adequate training and skill and the constraints implied by appropriate education and experience. They also emphasize the cost effectiveness of competent medical practitioners who in general treat patients satisfactorily with far fewer attendances than some other persons offering manipulative treatments.

The present Medical Benefits Schedule is discussed with particular reference to items 7911 and 7915 (manipulation under general anaesthesia). The schedule is considered inconsistent with current practice when it lists those items but fails to provide comparable item numbers for manipulation without anaesthesia, which is more often indicated, considerably safer and requires much more skill.

Major recommendations of the submission are:

- a) that a specific item number and rebate be included in the medical benefits schedule for manipulation by medical practitioners with appropriate skills and competence.

- b) that a register be established to specify those medical practitioners with appropriate qualifications and that use of the new item number and rebate be limited to those on this register.

- c) that the register be used as a basis for appropriate referral of patients and as a means of controlling and raising the quality of services provided in the field of musculoskeletal medicine.

The main statement of the submission is supported by two appendices, one being the constitution of the A.A.M.M. and the other a description of a medical practitioner's work in this field.

Points raised in the submission have been thoughtfully presented. No doubt all members of the Association will look forward with interest to the results of the Review Committee's deliberations.



BOOK REVIEW

Manual Medicine Diagnostics

by Jiri Dvorak and Vaclav Dvorak,
Georg Thieme Verlag, Stuttgart, 1984

The scientific basis of musculoskeletal medicine was never in doubt but is now much better defined, thanks to recent research into neurophysiology. Clinical practice with its empirical facts is now firmly underpinned by the objective validity of reproducible experimental findings. The empirical art has become a true clinical science.

Scientific objectivity is nowhere more important than in the area of manual diagnosis of musculoskeletal problems. The new book by Dvorak and Dvorak sets out the principles of manual diagnosis and undertakes to demonstrate their scientific bases by linking each principle with the relevant findings of neurological research.

The book begins with a section on spinal biomechanics and examination of the spine with reference to its known functions. Biomechanical concepts are explained, then used as foundations for a detailed description of clinical examination techniques, with some reference also to ancillary tests such as radiological and ultrasonic investigations.

Next is a section on neuropathophysiology of the apophyseal joints, setting out known facts of articular neurology including the mechanisms and neurological pathways of pain reflexes linking articular and myofascial structures.

Features and mechanisms of radicular and non-radicular spinal pain syndromes are then discussed with emphasis on pain referral, myofascial trigger points and spondylogenic reflex syndromes. The individual syndromes are illustrated with a series of full-page anatomic plates in an atlas section at the back of the book.

The rest of the work is devoted to the muscles and ligaments of the trunk. Each muscle is considered in turn with a detailed description of its origin, insertion, course and relations, nerve supply, actions and techniques of palpation. Accompanying anatomic diagrams illustrate the text and a table correlates segmental relationships and the spondylogenic reflex syndromes with which each muscle is associated.

The pelvic ligaments are treated similarly, with regional anatomy, functions, palpatory techniques and spondylogenic reflex syndromes described in the text and illustrated with clear anatomic diagrams.

The book manages to be at once concise (only 170pp. in all) and reasonably comprehensive. The relevant facts are stated clearly and selected references direct the reader to supporting research literature.

In all, it provides an excellent introduction to the subject of manual diagnosis from a scientific point of view and will be of value to students and teachers of musculoskeletal medicine. Experienced practitioners will find it of interest too, as a resume of the subject and a perspective on recent research findings.

The book has another appeal. It is one of those uncommon textbooks in which design and layout significantly enhance the information contained. Paper, typefaces, tables and illustrations have been thoughtfully blended to reinforce the concepts presented.

If the purpose of a book is to convey information to the reader, this is a very good book.

Manual Medicine Diagnostics is available from the D.A. Book Co., P.O. Box 163, Mitcham, Victoria, 3132. Price \$37.25 (posted).

CLASSIFIED ADS

will be accepted for publication in the Bulletin. As a special introductory offer, members' ads will be printed free of charge, so long as they are brief and to the point. Non-members' ads. will be subject to the Bulletin's ridiculously low advertising rates. All enquiries to the editor.

Extracts from

The British Association of Manipulative Medicine Limited

BAMM

NEWSLETTER

MEETING REPORT

from Dr. James Hawkins, Edinburgh

I went to the National Ankylosing Spondylitis Society Symposium here in Edinburgh on 7 April 1984. I found it fascinating and it stimulated me to do some background reading. I know many BAMM members will be aware of Calin & Fries' paper (N. Engl. Med. 1975; 293-9) which suggests that in fact ankylosing spondylitis is just about as common in females as males and that the prevalence of the condition is 10-15 per thousand. The previously accepted figures of frequency would then be underestimating by a factor of 10 to 20. Studies from Vancouver and Chicago support this increased estimate of prevalence and make ankylosing spondylitis a relatively common condition. Calin & Fries make the point that 'this population with undiagnosed ankylosing spondylitis cannot be regarded as having 'subclinical disease' since all were symptomatic and were in fact detected because of their symptoms.'

One patient, for instance, had undergone intravenous pyelography and lumbar aortography. Morning stiffness of more than one hour, stiffness that was relieved by exercise, and a good response to anti-inflammatories were all highly suggestive of A.S. It was also disturbing that they found that none of the X-ray films that had already been taken of these A.S. sufferers had been reported on by the radiologist as showing sacroiliitis, though when they were re-assessed for this study most 'showed definite bilateral sacroiliitis on a straight pelvic view and were easily picked 'blindly' out of control films.' That may not even be the end of the story as it has been noticed that there is an increased prevalence of A.S. even in the non-B27 first degree relatives of B27 positive A.S. sufferers (Autumn/Winter 1983 NASS Newsletter reporting on a study from John Hopkins University).

To add insult to injury, X-rays and ESR's may in fact not be helpful. Professor Malcolm Jayson (Br. Med. J. 1984; 288:740-741) writes 'Mild forms of ankylosing spondylitis are frequently misdiagnosed. Such patients have longstanding back pain and stiffness of gradual onset, aggravated by rest and relieved by exercise, but

may have normal erythrocyte sedimentation rates and no radiographic features of ankylosing spondylitis. The tissue type HLA-B27 is present, but this is not helpful as B27 is frequently present in healthy people. It is important to distinguish it from other back problems, for, if neglected, ankylosing spondylitis may lead to permanent stiffness and disability.'

The importance of early diagnosis was hammered home at the Edinburgh Symposium. Dr. R.D. Sturrock from Glasgow showed fascinating slides illustrating how early treatment with physiotherapy and anti-inflammatories could reverse initial deformities. Allan St. J. Dixon from Bath, writing in the edition of the NASS Newsletter I have already mentioned, makes the important point that if spinal stiffening or hip involvement has not occurred in the first ten years of the disease it is highly unlikely to occur later. What happens in the first ten years, it seems, sets the pattern for the future. Professor Ball of Manchester University has been doing research on this subject and he suggests that perhaps movement promotes fibrous growth rather than bone repair. He states 'mobility of the spine inhibits ankylosis.' Miss Bowman, a physiotherapist lecturing at the Edinburgh Symposium, described the four measurements they use to monitor A.S. patients' progress. They are (i) the distance between the occiput and the wall when the patient is standing with heels and back against the wall, (ii) flexion of the spine, (iii) abduction of the hips - they measure the distance between the medial malleoli when both hips are fully abducted with the patient supine on the floor, and (iv) chest expansion.

It was pointed out how insidiously degeneration in posture could creep up on an A.S. sufferer and how important it was to follow them up to monitor this. NASS, who are an entirely admirable association, do a booklet and a tape on the important exercises with particular emphasis on extension. They can be reached at 6 Grosvenor Crescent, London, SW1X 7ER.

A final point I discovered is that as many as a third of A.S. sufferers are likely to develop an attack of iritis at some time in their lives. Failure to attend an eye hospital speedily can result in permanent damage. Presumably this is a warning well worth giving to any sufferer.

I suspect that BAMM members are likely to come across numbers of undiagnosed A.S. sufferers in the course of their work. Early recognition obviously pays large dividends. Professor Jayson sets out five criteria laid down by Dr Calin (NASS Newsletter) - (a) younger person under the age of 40, most commonly between 15

and 25, (b) insidious back pain gradually creeping up on the sufferer, when compared with mechanical damage which very often arrives swiftly and acutely, (c) lasting three months or longer whereas mechanical pain often does not last so long, (d) early morning stiffness in the back, and (e) exercise bringing a reduction in pain.

This digging about for more information on A.S. seems to be a helpful thing to do for my own work with musculoskeletal pain, so I thought some of the Newsletter readers might be interested as well.

BAMM ABSTRACT

M. Anne Chamberlain and Janette Munton:

"Designing chairs for the disabled arthritic"

British Journal of Rheumatology 1984; 23 : 304-308.

Anthropometrics (the study of body measurements) dates from 1835. There is a wide range of dimensions in the human population and it is difficult to accommodate all these in a single chair design for all.

Of 379 arthritic patients interviewed, it emerged that the primary requisite of an easy chair for this group is that it should be easy to get out of. Features which promote ease of rising include a high seat, long armrests with rounded wooden ends and a firm seat cushion which is not too deep. The absence of a bar below the seat is important for these patients and also for those with strokes. All such patients have to get the centre of gravity well forward over widely based feet and uncurl as they rise. In some cases, spring seats and chairs, even motorised chairs, may be helpful.

Forces acting through the knee joint are considerable; seven to three times the body weight depending on the lowness from which one rises. Great reductions of joint and muscle loads are achieved by raising the seat and by the aid of armrests.

In general, it can be said that lumbar disc pressure is low if:

- (a) Some body weight is transferred to a support;
- (b) Back muscle activity is lower;
- (c) Lumbar curvature is closest to its physiological normal.

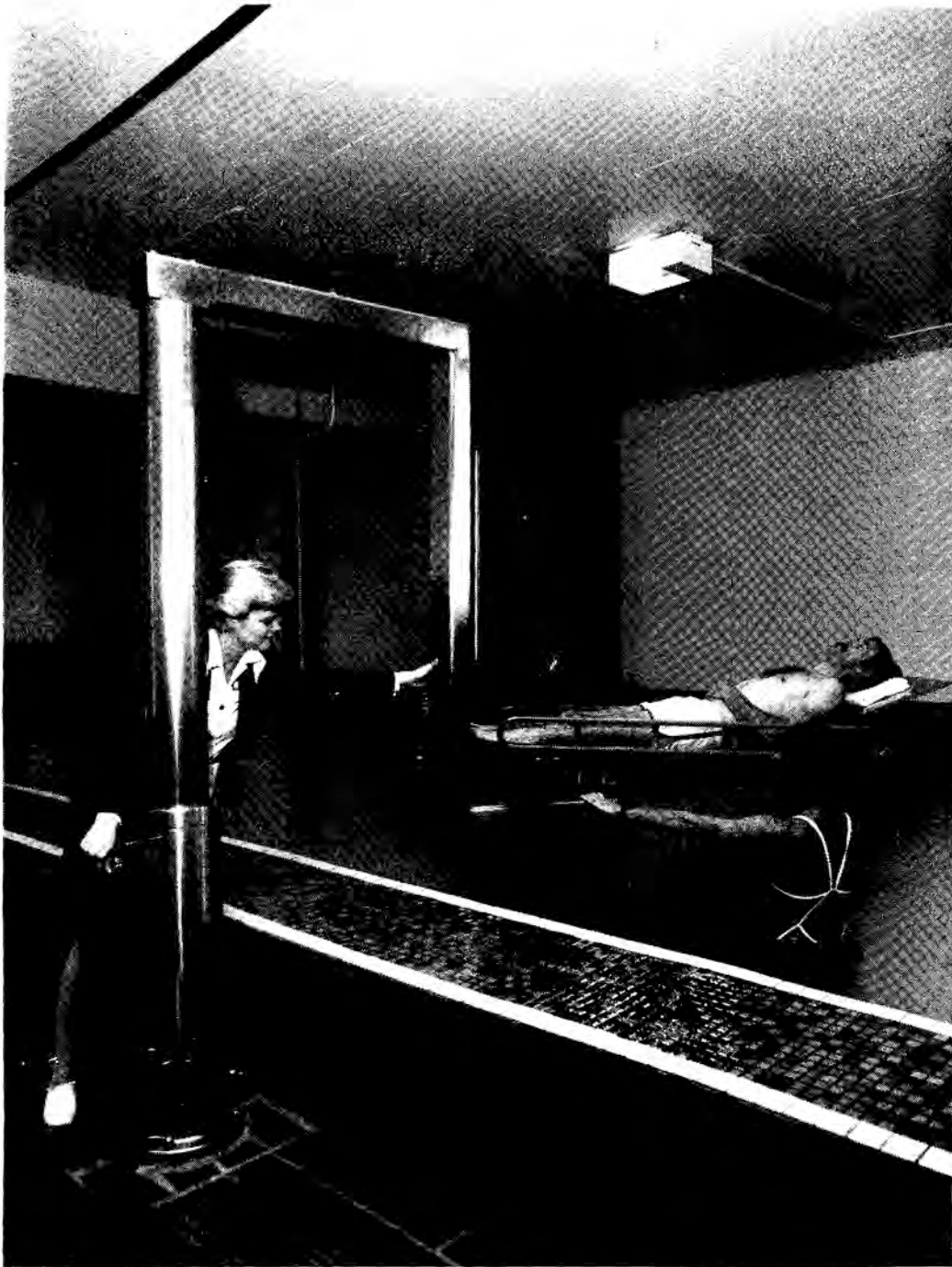
Whatever other features a chair designed for the disabled has (be it on wheels or not) it must have certain criteria:

- (1) A seat length sufficient to support most of the thigh with 5° inclination backwards;
- (2) Seat height which allows knee and hip flexion of 135° (footrests should so conform);
- (3) A backrest inclination of some 105° with lumbar support;
- (4) Armrests to take the load from the lumbar spine.

Comment

This review points out that what suits patients with chronic diseases is usually equally suitable for the able-bodied. Those using a chair in an office frequently lean forward transmitting body weight through their arms to a desk or table, rather than seeking the support of the back and sides of a chair. To improve spinal health in sedentary workers, ergonomics may be more important than small changes in chair design.

HYDROTHERAPY UPDATE



This modern adaption of the mediaeval ducking chair has proved invaluable in the assessment of patients with compensation injuries. The patient is held securely in the frame and submerged for periods of from ten to thirty minutes during an average treatment session lasting three days. After the longer submersions even refractory patients usually confess their errors and will withdraw all claims for compensation. One patient recently admitted liability not only for his accident but also for the Hilton bombing, the Gulf war, the energy crisis and the decline of the dollar, all after only eight submersions.

The device is ergonomically sound, all lifting being done by hydraulics, and the secure patient frame prevents the minor injuries associated with struggling during the first few minutes of submersion

Or is it? ... answer in the next issue of the Bulletin.

ADVERTISERS' INDEX

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There is space on this list for many other companies with interests in the field of musculoskeletal medicine. The Bulletin welcomes advertisements for any products or services considered worthy of members' attention. Advertising managers are invited to contact the editor.



APPRECIATION

The editor wishes to express his appreciation to:

- ★ Vina and Alex McIntosh and all the staff of A.M. Printing Services for their advice and assistance with the preparation of the Bulletin.
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- ★ Roslyn and Ian Howarth for painstakingly setting the type and coping with the neologisms.

