

Dive to walk

Most of us dive for pleasure, to experience the underwater world, to swim with the fish or to explore a wreck, but one British diver has a unique reason to venture underwater, he dives so that he can walk. To prove his point, he has just completed his 300th dive with Red Sea Waterworld in Taba Heights.

Mark Chenoweth was born with spina bifida. He was able to lead a relatively normal life until 1996, when he lost the feeling in both legs and was forced to start using a wheelchair. Mark's first experience of diving came while on holiday in Rhodes with his wife. He enjoyed a try-dive in the hotel pool so much that he set out to obtain a medical in order to do an open-water dive.

Unable to find a doctor willing to sign, he returned to England, where his search proved no more fruitful. Six doctors, diving and drug specialists, all gave reasons why Mark could not dive, one even telling him that it would be the last thing he ever did! Mark refused to give up. On his next holiday, to Minorca, he saw a doctor but this time 'forgot' to mention a few things (six to be precise – not a step normally to be recommended) and received the certificate he needed!

After two days of pool and theory training, the first two open-water dives went well, any anticipated problems easily overcome. Then, on the Saturday, a slight hitch with weightbelt replacement required the third dive to be repeated. The re-run third dive went well, and back on the dive boat, Mark realised that his legs felt "different". Amazingly, especially as he was on a boat, he stood up! Every night Mark's father-in-law had brought his wheelchair to take him from the transfer bus into the hotel. But that night he was amazed to see Mark stroll past him, straight into the arms of his stunned wife.

Since this momentous day, Mark has learnt more about his phenomenal recovery. It is only a temporary cure, and dives to 16 metres' sea water (msw) depth have no effect, but at 17 msw, the atmospheric pressure seems to be enough to alter his spinal cord. The deeper he dives, the longer he regains the use of his legs, but the gases are not the trigger, as they return to normal in a matter of hours. A 20 msw dive will see him return to his chair within days, two weeks at most, but a deep dive will keep him mobile for nearly six months!

Mark has gone on to complete many PADI specialities, including Deep Diver, Rescue Diver and Master Scuba Diver. A hyperbaric medical team has carried out chamber dives with him, and because of the high oxygen levels these gave the best results, leading Mark to complete his nitrox qualification.

The team suggested that he might have a bubble on his spinal cord that was reduced under pressure, but after a CAT scan ruled this out no other theories emerged and the reason remains a mystery. Mark reckons himself extremely lucky to have found a way to defy medical science, especially as the answer is diving, which he describes as "the most wonderful hobby anyone could ever imagine".

At recreational diving limits, the lack of sensation in parts of Mark's body means that if he were to suffer a bend he would not necessarily realise it. He reduces this risk by diving well within limits and ascending at a rate far slower than the recommended 18 metres per minute. Mark Chenoweth is looking forward to the next 300 dives, and hopes to complete some technical training in the near future.

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2008**



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SPUMS notices and news

South Pacific Underwater Medicine Society Diploma of Diving and Hyperbaric Medicine

Requirements for candidates

In order for the Diploma of Diving and Hyperbaric Medicine to be awarded by the Society, the candidate must comply with the following conditions:

- 1 The candidate must be medically qualified, and be a financial member of the Society of at least two years' standing.
- 2 The candidate must supply evidence of satisfactory completion of an examined two-week full-time course in Diving and Hyperbaric Medicine at an approved Hyperbaric Medicine Unit.
- 3 The candidate must have completed the equivalent (as determined by the Education Officer) of at least six months' full-time clinical training in an approved Hyperbaric Medicine Unit.
- 4 The candidate must submit a written proposal for research in a relevant area of underwater or hyperbaric medicine, and in a standard format, for approval by the Academic Board before commencing their research project.
- 5 The candidate must produce, to the satisfaction of the Academic Board, a written report on the approved research project, in the form of a scientific paper suitable for publication.

Additional information

The candidate must contact the Education Officer to advise of their intended candidacy, seek approval of their courses in Diving and Hyperbaric Medicine and training time in the intended Hyperbaric Medicine Unit, discuss the proposed subject matter of their research, and obtain instructions before submitting any written material or commencing a research project.

All research reports must clearly test a hypothesis. Original basic or clinical research is acceptable. Case series reports may be acceptable if thoroughly documented, subject to quantitative analysis, and the subject is extensively researched and discussed in detail. Reports of a single case are insufficient. Review articles may be acceptable if the world literature is thoroughly analysed and discussed, and the subject has not recently been similarly reviewed. Previously published material will not be considered.

It is expected that all research will be conducted in accordance with the joint NHMRC/AVCC statement and guidelines on research practice (available at <http://www.health.gov.au/nhmrc/research/general/nhmrcavc.htm>) or the

equivalent requirement of the country in which the research is conducted. All research involving humans or animals must be accompanied by documented evidence of approval by an appropriate research ethics committee. It is expected that the research project and the written report will be primarily the work of the candidate.

The Academic Board reserves the right to modify any of these requirements from time to time. The Academic Board consists of:

Dr Fiona Sharp, Education Officer, Professor Des Gorman and Dr Chris Acott.

All enquiries should be addressed to the Education Officer:

*Dr Fiona Sharp,
249c Nicholson Road
Shenton Park, WA 6008
Australia*

E-mail: <sharpief@doctors.org.uk>

Key words

Qualifications, underwater medicine, hyperbaric oxygen, research

Approved extracts of minutes of the SPUMS Executive Committee Meeting, held on 19 April 2007 at Oceans Resort, Tutukaka, New Zealand

Opened: 1945 hr

Present: Drs C Acott (President), G Hawkins (Acting Secretary), F Sharp (Education Officer), D Smart (ANZHM Representative), M Davis (Editor)

Apologies: Drs S Sharkey (Secretary), G Williams (Treasurer), C Lee (Committee Member), V Haller (Public Officer), D Vote (Committee Member), M Walker, R Walker (Immediate Past-President)

1 Minutes of previous meeting

Minutes accepted for AGM 2006. Proposed by F Sharp, seconded by C Acott.

2 Matters arising from previous minutes

2.1 Availability of R Walker for SPUMS representation at the EUBS attendance to be confirmed.

2.2 G Hawkins attended the Asian Hyperbaric and Diving Medical Association meeting in Bali, Indonesia and discussed the use of the SPUMS Journal *Diving and Hyperbaric Medicine* as the journal of AHDMA. This was accepted by the members of AHDMA and the President

of AHDMA will forward a letter to the President of SPUMS to initiate formal discussions. At the meeting was Professor E Sanchez (President of Latin America Chapter of UHMS) who stated that the Latin America Chapter of UHMS would also like to initiate talks regarding the use of *Diving and Hyperbaric Medicine* as its official journal.

3 ASM 2007

Dr Michael Davis suggested that the members of Dive Tutukaka be offered an invitation to the 2007 ASM dinner at SPUMS' expense. It would not affect the overall profitable outcome of the meeting significantly. The proposal was accepted by the committee members.

4 ASM 2008

4.1 The 2008 ASM is to be held at Liamo Resort, Kimbe, PNG.

4.2 Payment of guest speakers was discussed. The Committee agreed to a proposal that invited guest speakers would be given AU\$ 5,000.00 per speaker in lieu of airfare as this provides them greater flexibility in deciding how to travel and arrange their diving and accommodation.

4.3 The 2008 ASM will have a slightly different format with lectures in the morning and diving in the afternoon to ensure optimal conditions.

5 ASM 2009

5.1 Three locations had been proposed by Dr D Smart. Fiji was accepted by the Committee as the best option.

5.2 Due to issues regarding political tensions in Fiji in the recent past, a second location is to be investigated by the ASM Convenor in conjunction with the dive travel company.

5.3 It was also proposed that every ASM should be put out to tender process with two companies in the future and this was thought to be acceptable. For further consideration by the Committee.

6 ASM 2010

It was suggested by G Hawkins that the 2010 ASM could be a joint ASM with the Asian Hyperbaric and Diving Medical Association in South East Asia. He will investigate further and report back to the Committee at the next meeting.

7 Editor's report

7.1 Dr Davis will continue to investigate the linkages to be developed between SPUMS and EUBS with regard to the Journal and he has a preliminary set of criteria for EUBS to consider at their ASM.

7.2 Dr Davis has requested a review of the documentation for the role of Editor of the Journal and he has distributed proposed changes. This is for consideration by all the committee members.

8 Education report

8.1 Main report as presented at AGM.

8.2 Dr M Davis has resigned from the Education Committee stating a potential conflict of interest with respect to his role in the Auckland Graduate Diploma Course. This was reluctantly accepted.

8.3 Dr F Sharp will clarify the role of Professor Des Gorman and poll people for any interest in becoming members of the Education Committee.

9 Other business

Nil

Closed: 2044 hr

Dates and venues of the SPUMS Annual Scientific Meetings

1972	Australia, Heron Island
1973	AGM only, no ASM
1974	Fiji
1975	Vanuatu
1976	Fiji
1977	Truk
1978	Fiji
1979	Vanuatu
1980	Malaysia, Tioman
1981	Papua New Guinea (PNG), Madang
1982	Philippines
1983	Fiji
1984	Thailand, Phuket
1985	The Maldives
1986	French Polynesia, Morea
1987	Solomon Islands
1988	Fiji
1989	Vanuatu
1990	Palau
1991	The Maldives
1992	Australia, Port Douglas
1993	Palau
1994	PNG, Rabual
1995	Fiji
1996	The Maldives
1997	New Zealand
1998	Palau
1999	Layang Layang
2000	Fiji
2001	PNG, Madang
2002	Vanuatu
2003	Palau
2004	Noumea
2005	The Maldives
2006	Fiji
2007	New Zealand

Greetings from the new SPUMS Webmaster

Hello to all members!

I just wanted to inform you of the developments to the Website that may be of some interest to SPUMS members.

First, I have taken over the duties of Webmaster from Dr Robyn Walker, who has made the Website a great source of information, particularly for members who can now use it to pay for both membership and next year's ASM. Yes, that's right, you can now pay for your ASM online and this has made a significant improvement to the organisational running of the Society for now and the future.

Second, I have added to the Website some papers from the SPUMS Journal on diving (and general) travel by Dr Trish Batchelor. They involve things like traveller's diarrhoea, prophylaxis for malaria and other features such as constructing a travel medical kit. All these papers are in pdf format and can be seen in the Travel section on the main menu. Thanks must go to both Dr Batchelor and Dr Mike Davis for allowing the publication of these articles.

Third, we will start to establish a webmail send-out capacity from the site so that any new events or changes in the Society and the Website can be sent to people judiciously.

Finally, we will be endeavouring to place our journal, *Diving and Hyperbaric Medicine*, online for members in full-format capacity. This is an evolving project that will allow those with member access the ability to search and read through all issues of the Journal at their leisure. In conjunction with this we have decided to make the Journal available to the general public via the Rubicon Foundation, which has a mandate to make diving and hyperbaric papers available for people to access around the world. Several 'classic' papers have been placed online at <<http://rubicon-foundation.org/>>, which has over 4,000 articles and papers already available. We will endeavour to make papers from the SPUMS Journal available up until the last three years (so that members retain privileged access to the most recent papers).

The idea behind this is to make the work that we have done in this part of the world more accessible to people in the northern hemisphere as well as lifting the profile of the whole organisation on a worldwide basis.

So there are several exciting things happening and I would like to thank Dr Robyn Walker and Steve Goble for their efforts in setting up the SPUMS Website. I hope that I can continue to build it from the strong base that they have developed.

Glen Hawkins (Webmaster – In training)

UHMS fitness-to-dive course now certified in Europe

The Diving Medical Advisory Committee, the European Diving Technology Committee, the European College of Baromedicine and the European Committee for Hyperbaric Medicine have all recently approved the Undersea and Hyperbaric Medical Society (UHMS) Medical Assessment for Fitness to Dive Course. This brings an important academic component to the course for European post-graduate education in underwater and hyperbaric medicine. The Immediate Past-Executive Director of UHMS asks "What's next for our course?" – the answer: Australia and the South Pacific. After reading an e-mail exchange between Dr Michael Bennett and Dr Mario Lanza concerning an American physician performing physical examinations for Australian divers, the UHMS will be following advice from Dr Bennett and the Chair of its Diving Committee, Dr Simon Mitchell, as the UHMS course is submitted for consideration by SPUMS to be included in a list that would qualify a physician who attends this course to perform Australian diving medicals according to the Australian recreational and occupational diving standards.

Auckland University Post-graduate Diploma in Medical Science – Diving and Hyperbaric Medicine

The ANZCA Council has agreed that successful completion of the "Medicine 719" component of the University of Auckland Post-graduate Diploma in Medical Science – Diving and Hyperbaric Medicine, will be accepted as an alternative to the ANZCA DHM Formal Project.

Additionally, successful completion of the "Medicine 714 and 715" components of the University of Auckland Post-graduate Diploma in Medical Science – Diving and Hyperbaric Medicine, will be accepted as an alternative to the formal course requirements of the ANZCA Certificate in Diving and Hyperbaric Medicine.

It was further agreed that up to six months of the training towards the University of Auckland Post-graduate Diploma in Medical Science – Diving and Hyperbaric Medicine, may be credited towards the six-month practical experience component of the ANZCA Certificate in Diving and Hyperbaric Medicine which is not required to be undertaken in an accredited unit.

*L F Wilson
Chair, Hospital Accreditation Committee*

Editor's note: Sadly the Auckland programme in diving and hyperbaric medicine has been abandoned by the University mainly on financial grounds. Therefore, the above applies only to existing graduates and current students. As the programme director, the writer is extremely disappointed that this attempt to link diving and hyperbaric medicine to an academic institution in Australasia at a more basic level than that of the ANZCA Certificate has failed.

The Australian and New Zealand College of Anaesthetists Special Interest Group in Diving and Hyperbaric Medicine (SIG-DHM)

ANZCA Certificate in Diving and Hyperbaric Medicine

Eligible candidates are invited to present for the examination for the Certificate in Diving and Hyperbaric Medicine of the Australian and New Zealand College of Anaesthetists.

Eligibility criteria are:

- 1 Fellowship of a Specialist College in Australia or New Zealand. This includes all specialties, and the Royal Australian College of General Practitioners.
- 2 Completion of training courses in Diving Medicine and in Hyperbaric Medicine of at least 4 weeks' total duration. For example, one of:
 - a ANZHM course at Prince of Wales Hospital Sydney, **and** Royal Adelaide Hospital or HMAS Penguin diving medical officers course **OR**
 - b The "Medicine 714 and 715" components of the University of Auckland Post-graduate Diploma in Medical Science – Diving and Hyperbaric Medicine.
- 3 **EITHER:**
 - a Completion of the Diploma of the South Pacific Underwater Medicine Society, including 6 months' full-time equivalent experience in a hyperbaric unit and successful completion of a thesis or research project approved by the Assessor, SPUMS.
 - b **and** Completion of a further 12 months' full-time equivalent clinical experience in a hospital-based hyperbaric unit which is approved for training in Diving and Hyperbaric Medicine by the ANZCA.

OR:

 - c Completion of 18 months' full-time equivalent experience in a hospital-based hyperbaric unit which is approved for training in Diving and Hyperbaric Medicine by the ANZCA
 - d **and** Completion of a formal project in accordance with ANZCA Professional Document TE11 "Formal Project Guidelines". The formal project must be constructed around a topic which is relevant to the practice of Diving and Hyperbaric Medicine, and must be approved by the ANZCA Assessor prior to commencement. Successful completion of the "Medicine 719" component of the University of Auckland Post-graduate Diploma in Medical Science – Diving and Hyperbaric Medicine will be accepted as an alternative to the ANZCA DHM Formal Project.
- 4 Completion of a workbook documenting the details of clinical exposure attained during the training period.
- 5 Candidates who do not hold an Australian or New Zealand specialist qualification in Anaesthesia, Intensive Care or Emergency Medicine are required to

demonstrate airway skills competency as specified by ANZCA in the document "Airway skills requirement for training in Diving and Hyperbaric Medicine".

All details are available on the ANZCA website at: <www.anzca.edu.au/edutrain/DHM/index.htm>

*Dr Margaret Walker, FANZCA
Chair, ANZCA/ASA Special Interest Group in Diving and Hyperbaric Medicine*

Report from the ANZCA SIG-DHM

There was a highly successful ANZCA SIG-DHM scientific meeting held at the ANZCA Annual Scientific Meeting (ASM) in Melbourne on 28 May 2007. A cutting-edge scientific programme organised by Dr Mike Bennett included international and local experts, and attracted an audience of over 100 enthusiastic listeners. Simon Mitchell kicked off the session with an update on the treatment of decompression illness in the 21st century. Professor Bruce Speiss then gave a fascinating presentation about the role of perfluorocarbon emulsions in modern medicine, with applications ranging from blood replacement to the treatment of decompression illness. Glen Hawkins presented an update on the chronic hypoxic wound database, and David Smart closed with a presentation of the current state of the evidence regarding the role of transcutaneous oximetry as a tool to predict outcomes in hypoxic wounds.

There were many questions from the floor, with a high level of interest, especially in the information presented by Professor Speiss. Bruce Speiss is Professor and Chief of Cardiothoracic Anesthesia and Director of Research in the Department of Anesthesiology at Virginia Commonwealth University. As Director of the Virginia Commonwealth University Reanimation Engineering Shock Center his major research interests are in the areas of blood substitutes, the pathophysiology of coagulation and inflammatory abnormalities in shock. Professor Speiss also conducts research into decompression sickness and submarine escape with the United States Navy. He was a fascinating speaker, and is keen to return for another session, perhaps in 2009.

The next SIG-DHM scientific meeting will be held in Sydney during the May 2008 ANZCA ASM, and all interested practitioners are welcome to attend.

*Dr Margaret Walker, FANZCA
Chair, ANZCA/ASA Special Interest Group in Diving and Hyperbaric Medicine*