voice to those who say that no person should commence scuba diving in any capacity, including a resort course, unless they have a proper medical examination.

John Robinson

MANAGEMENT OF DIVING ACCIDENTS

17 Contour Drive, Mullaloo
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4/12/94

Dear Editor

I have some comments on the paper *Management of Diving Accidents* by Des Gorman (SPUMS J 1994; 24 (3): 148-157). I thought that the paper was, in general, very good but I did notice that a few small details were missing from the discussion about stage and bell recovery. These details are small but important, and possible the difference between a successful recovery and a failure.

All stages and wet bells should be fitted with a harness, or positive securing arrangement, capable of holding the unconscious diver in his seat or in a position to allow successful removal of his helmet or mask. All wet bells should carry a "rigid collar" as part of the bell kit.

The section on closed bell recovery is very dangerously worded. Recovery of an unconscious diver into a bell should always be done by floating, or pulling, the diver into a flooded or partially flooded bell.

The water should always be left in the bell until resuscitation is successful or the diver is proven dead. He will be adequately heated by his hot water suit. On no account whatsoever should an unconscious diver be winched into a dry bell. I refer the reader to page 169 (*Impaired consciousness, near drowning*) and to pages 171-78 (*Circum-Rescue Collapse: collapse, sometimes fatal, associated with the rescue of immersion victims*) of the September 1994 Journal.

A rigid collar should be considered an essential item of the bell medical kit, it is not at present, and should be placed on the rescued diver as soon as possible.

I would also refer readers to my own book *The Diver's Bible*, pages 38-40 covering bell diver recovery. The recovery procedure described was formulated from my own experience.

In the early 1970s I was employed as a diver in the North Sea. I was unfortunate enough to have to recover three unconscious bell divers, at different times. All three recoveries were successful. The decision to leave the water in the bell until full recovery was my own common sense decision. In those days most company manuals said to blow the water as soon as possible.

Later I ran a bell diver training school in South East Asia for Comex. During this period, participating in hundreds of diver recovery exercises, we had partial loss of consciousness by two divers, hanging in the harness, when the water was blown out of the bell. Full recovery was made when the bell was re-flooded. The divers then had their gear removed and assisted with the re-stowing of gear in the bell. These experiences confirmed to me that to winch a diver in dry, would risk killing that man.

Phill Henderson

PRE-SCUBA DIVE MEDICALS AND AS 4005.1

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18/1/95

Dear Editor

I am disturbed that, over the past few weeks, I have seen three instances where candidates have been passed "Fit To Dive" when it is my opinion, and by my interpretation of AS4005.1 standards, they should not have been.

The first case was a novice certified fit to dive when he was not fully examined from a neurological point of view. The diver denies he had a Romberg test done nor was asked to do Serial 7's. He said that he was not asked whether he uses puffers, which he does although he felt that he did not suffer from asthma at the time. He used to get just a little wheezy and would use his sister's Ventolin at times. He presented to me the day after diving, and was referred to the Alfred Hospital for treatment of decompression illness (sickness) after 3 shallow dives in 5 m (maximum) at the start of an Open Water Course. His instructor was so concerned about his profound lethargy that he was refused to continue with the course until he was cleared medically. He had 5 treatments over 5 days and been advised to cease diving. His pre-dive respiratory function test was apparently very borderline but not followed up. There was no pre-dive recorded serial 7 time nor a Sharpened Romberg score.

The second case was a young woman who had had trouble for a long time with "popping her ears" whenever she went flying or car driving in the mountains. She claims that her examining doctor did not ask her about this history. On examination he allegedly blew some air into her ear canals. She was not asked to do a Valsalva manoeuvre whilst he looked at her ear drums nor was an impedance tympanogram performed before and after such a manoeuvre. She had experienced great difficulty in her

pool work at only 2 m at the start of her scuba course, with ear pain that she could not relieve by any method demonstrated to her by her instructor, who asked her to get a second medical opinion. On testing there was no evidence of any hyperbaric injury done to her middle ear cavities. On impedance tympanography it was evident that she could not pressurise her middle ear cavities by a Valsalva manoeuvre. She could not even get her pressures to atmospheric pressure after several attempts. It was suggested that she should refrain from further attempts at scuba diving.

The third case is a candidate that I had failed earlier on several grounds, only to find out several weeks later that he had been passed "fit to dive" by another doctor, recommended by the dive school after the candidate was told he should not dive. I had spent some considerable time discussing all the reasons why he should not dive. I am informed that the dive school knew that he had failed and told him to get another medical from another doctor! I failed him because of his known previous aggressive and sometimes compulsive and illogical behaviour, IV drug use, the fact that he was Hepatitis C positive, a heavy tobacco user and had a mild peripheral neuropathy. He had been a patient of mine for a couple of years. His respiratory function showed he had a sub-optimal FEV_1 and a FEV_1/FVC ratio of 63%. His lung function was confirmed by a hospital respiratory function unit which demonstrated an 18% fall after a histamine challenge and a very prompt recovery after inhalation of Ventolin. His ratio was still documented at 63% after a couple of weeks of alleged non-smoking. I am told that his ratio had risen to 73% on the second dive medical which is still below the 4005.1 standard of 75%. He has undergone an Open Water Course !

I believe that possibly due to some form of perceived competition some doctors who are on the SPUMS Diving Doctor List, are doing quick and cheap dive medicals but are not necessarily following the AS4005.1 guidelines. I believe that one or two dive schools are not taking "NO" for an answer and thereby losing an intending student. They seem to be recommending the intending candidate to get a clear medical from another doctor who may not be quite as thorough. I can not for the life of me see how a complete history, examination, audiology and respiratory functions tests can all be done within the space of half a hour and costing only $40 or so.

The point that I am making is that it is quite obvious to two of the students that something in their dive medical examination went wrong, and that they were allowed to dive when, as is now clearly apparent to them, they should not have dived. They have wasted their $300 or more on a course they should not have undertaken in the first place. The third case was someone who was going to learn to dive regardless what was said to him and a dive school accommodated him!

I accept that we can not predict who is going to get decompression illness whilst undertaking safe diving practices, as in the first case. However it appears that the initial dive medical was not complete and information that could have been made available to the doctor was not given or found out because the appropriate questions do not seem to have been asked and the examination seems to have been incomplete.

Now that dive medicals are taking their rightful and respected role at the beginnings of a student's experience in scuba diving, it is not helping the cause when doctors, with the proper training, seemingly are not doing the right thing by the candidates. Unfortunately dive medicals are sometimes seen by some dive schools as something that is a waste of time and money for the student. If properly trained doctors do Mickey Mouse medicals, which are a waste of time, how are we going to keep the support for medicals from the responsible members of the diving industry?

Ross G. Wines

TECHNICAL DIVING

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28/12/94

Dear Editor,

I was surprised to read Dr Gormans's statement, "The issue of technical recreational diving is one where a close liaison between the Society (SPUMS) and these agencies will be of mutual benefit" in the President's Report 1994 in the December 1994 edition of the SPUMS Journal.

Dr Gorman has also recently announced that the Society's 1996 Annual Scientific Meeting will be devoted to a workshop on technical recreational diving.

This is different approach to that previously adopted by both SPUMS and several prominent SPUMS members since recreational mixed gas diving was first introduced into Australia in 1991.

I recall Dr Gorman's editorial in the January 1992 edition of this Journal in which he stated "In view of the above, it is not surprising then that the SPUMS policy on 'HighTech' recreational diving is that it should be actively discouraged and that this Society will not oppose any government who consequently legislates some limit on recreational diving."