TABLE 1

21 CASES OF ROUND WINDOW MEMBRANE RUPTURE

Cause		Treatment		Years diving since
Rapid descent	10	Surgery	14	4, 1, 6 ,1 ,16, 9, 1, 2, 12.
Difficulty in clearing ears	7	Medical	6	16, 14, 6, 1, 1.
None recorded	7	None	1	23.
Totals	24		21	Dived again 15

Repaired and never dived again	3	Medical treatment and gave up diving	1	No follow up	2

that particular ear to be affected. If there is to be a recurrence it will be in the predisposed ear, the one that has already been affected. Thus if deafness is a factor to be concerned about it will only be in that one predisposed ear. So the threat of total deafness should not be used as it would statistically be rare or in my guess 1 in a 100,000. Even with total deafness in 1 ear the NAL (Commonwealth National Acoustic Laboratory) Hearing Handicap is only 16%.

However before anyone rises to my contentious statements, there are rare cases of rupture of both left and right round window membranes at the same time. The only case I have been involved with was a member of a police diving team who after repairs of both ruptures retained normal hearing and was forbidden to dive in his profession, but carried on diving for recreation on my advice.

I have treated cases of round window rupture and I have never told the diver to give up diving. What I have said is that if they develop any further trouble they should telephone me as soon as possible for advice. This was what the diver with the crayfish in his ear did.[3] Two cases of repaired round window rupture have carried out over 10 years each of diving since the operation (Table 1). I have even operated on a diver who ruptured her round window membrane 3 weeks before she went diving.

Noel Roydhouse

References:

1 Fitzpatrick P. Diving after round window rupture. *SPUMS J* 1994; 24 (3:)144

2 Knight J. Diving after round window rupture. *SPUMS J* 1994; 24 (3:)144

2 Roydhouse N. Diver's ear pain or claws 2. *SPUMS J* 1988; 18 (1)**:** 32-33

AURAL BAROTRAUMA

Suite 2, 37 Gordon Street
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1/12/94

Dear Editor,

I wish to report a recent case of aural barotrauma from Hayman Island.

The 35 year old male undertook a resort course, and in his own words, was a little alarmed as was his wife at the number of disclaimers he signed before the dive. There was, as is usual, only a questionnaire and no formal medical examination.

The patient experienced severe pain at 3 m, continued to 9 m and then experienced unusual whistling noises on ascent. His ear remained painful the following day and he was referred to me.

I found the right ear had evidence of chronic otitis media in as much the incudostapedial joint was eroded and the drum adherent forming a myringostapedopexy. Bubbles of fluid were quite obvious in the middle ear. The left ear had both evidence of otitis externa and middle ear fluid. His nasal septum was grossly deviated to the left.

The patient insisted that he must fly back to England within 48 hours against my wish to treat the infection and barotrauma conservatively.

If I had seen this patient before commencing a scuba course I would have declared him unfit for diving, and explained why, on the basis of his chronic otitis media and gross septal deviation. It is not uncommon for barotrauma to arise in such patients who are relatively asymptomatic. Despite all the disclaimers signed, it is my view that the diving agency is culpable and I believe it is only good fortune rather than good planning, that is preventing the operators being sued.

I am aware of the numerous arguments about the needs for diving medical clearances but I must add my

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

40 Anderson Street,
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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