

The buddy system appears to have been reduced to a status of little importance in both Dr Walker's discussion of the fatalities and in the behaviour of divers and dive-leader/instructor referred to in these analyses. While not claiming that adherence to a rigid buddy system would have saved the lives involved, I feel certain that it would have significantly reduced the overall probability of the fatal outcome. Lip-service to the buddy system or the often joked about "two divers in the same ocean" is not enough. The buddy system consists of two divers, and only two divers, allocated before the dive and remaining together for the duration of the dive. It does not cover three divers, or, of more concern in these analyses of 1985 fatalities, the loose allocation of buddies with the understanding that, "... as soon as anyone's gauge showed 50 mPa they and whoever had next lowest remaining air would be ordered to ascent, the buddy groups being reallocated" (SC 85/6). It does not include sending divers back to the surface alone or the descent of one buddy alone whilst the other buddy "had no reason to watch his descent as he was then completing his own preparations to follow" (SC 85/9).

These situations all mean that there is no true dedication to a single buddy since pairing may vary during the dive or indeed that there may be periods of diving without a buddy at all. The price is obvious.

The dependence on a divemaster/instructor only exacerbates the situation since the dependent divers rely on the divemaster/instructor's decisions underwater and less on their own judgement and their own buddy system. This is necessary during training but requires rapid weaning toward the end of the course. If the students are not fully competent they should not be certified. Competency includes training in the buddy system; not as a member of a loose group with ill defined responsibilities. Although open to interpretation the buddy system involves at least the following components:

- * A joint decision as to the suitability of diving in the prevailing conditions (includes mental and physical status of the divers).
- * A joint decision on dive plan.
- * Assistance in gearing up.
- * Complete buddy check of all items of equipment

- Tank fully on
- Tank full
- Regulator function
- Belts, amount of weight, quick releases
- Mask
- BC function and use (including check for leaks)

- * Joint descent
- * Constant monitoring of buddy during the dive (air consumption behaviour)
- * Actively avoiding separation.

A further factor relevant to the fatalities in question is the need to plan a sensible air cut off point; making due allowance for depth, 'the red zone' is not always sufficient air in reserve. There is no excuse for running out of air underwater.

I have not gone into individual analyses of the fatalities but an interested reader by referring to the provisional Report on Fatalities will see the relevance of these comments to the individual cases.

Yours sincerely
Peter RL Mosse
FAUI Instructor 347

EDITOR

In fairness to the author of the Provisional Report it should be noted that as the Case Resumes, the Significant Factors, and the Table all noted the occurrence of SEPARATION in the eleven cases in which it occurred, it was assumed that readers would identify this factor for themselves. For this reason the Discussion listed the somewhat less obvious factors "whose significance deserves fresh consideration". It was indeed remiss to make such an assumption and the author apologises.

RADIAL KERATOTOMY THE DIVER'S DILEMMA

PO Box 6052
St Kilda Road Central VIC 3004

Dear Sir

I would like to relate my experience concerning radial keratotomy in the hope that one or more members of SPUMS may be able to cast some light upon the subject and its ramifications for divers.

I recently had an appointment with Dr X a specialist in radial keratotomy. He advised that I should abstain from diving for six months after the procedure. As diving is my principal sport and recreation I suggested that this period of "drying out" could be a problem. Dr X then suggested "you could probably squeeze it down to four months".

At this stage I began to worry about the arbitrary nature of these time frames and the basis from which they had been deduced.

I sought advice from Dr Y a diving medical expert of very high repute. Dr Y suggested that any diving activity should be prohibited for at least 12 months after radial keratotomy. He drew the analogy of a window pane with cuts 75% through its thickness trying to withstand hurricane force winds.

I got back to Dr Y and explained Dr Y's opinion. Dr X, who does not specialise in diving medicine assures me that six months would be more than adequate.

Now I am confused. Is it four or twelve months and who actually knows? Why not 2 years or even 5 years?

I am in a dilemma. The reason I want my eyes "fixed" is for diving but to get them "fixed" I must give up diving albeit for four to twelve months.

My question is simply this. Has any research been done on the effects of radial keratotomy on divers and if so, what are the results?

Yours faithfully

L Griffiths
Associate Member

This letter has been shown to Dr Y whose comments appear below.

As yet I have not read any published work dealing with the effects of radial keratotomy on divers. So my advice was based on the knowledge that radial keratotomy is normally restricted to those with mild myopia and that there have been corneal complications in patients in the USA. Under these circumstances I would not have the operation. Lenses in one's mask are much cheaper than the operation of radial keratotomy and are not associated with any ocular complications. Of course when someone has dropped a weight belt or a tank on your mask you can not see clearly using a borrowed mask. But care will prevent such accidents.

REPORT/DISCUSSION PAPER 1987-1

COMMENTS ON DECOMPRESSION SICKNESS IN WESTERN AUSTRALIA IN 1986

Douglas Walker

SUMMARY

There was a significant increase in the number of divers who attended at HMAS Stirling for recompression treatment during 1986 (20) and this increase has accelerated during 1987 (33 cases in the first 5 months). The information available concerning the divers treated during 1986 is reviewed to discover whether there are any identifiable reasons for this increase or identifiable remediable factors. It is suggested that the increase may be more apparent than real and represent a greater awareness among the at-risk diving community of the availability of the upgraded RCC facilities now available at HMAS STIRLING, this making visible a previously hidden frequency of decompression sickness. The length of delay before seeking medical assistance makes this probable.

CASE 1

This trained and very experienced diver had made a series of six dives to 30 metres for 20 minutes between 27th December and 6th January including a stop at 3m for 5 minutes in each ascent. He presented on 8th January. This knee had been injured in 1975. The knee was noted to have restricted movement. He had also made a dive to 6m for 50 minutes on 19th January but it was not stated whether this had effected his symptoms. He was treated on RN Table 62 plus IV fluids and dexamethasone and complete resolution of his symptoms was achieved. No additional details of these diver is known.

CASE 2

This trained and apparently experienced diver had made repeat dives on three consecutive days, an intermittent "pins and needles" sensation over his back, chest, and arms commencing after his last dive on 11th January. This became more severe and regular as the days passed until it was occurring ever 15-20 minutes. There were no other pains. He had some time in the past suffered an injury of his left shoulder and periodically experienced pain in this shoulder after repetitive and deep dives. There were no significant clinical findings. A diagnosis of neurological DCS was made and he was treated with IV fluids, dexamethasone (16 mgm then 8 mg tids),