enjoy skydiving if jumpers were forced to wear six parachutes, or rock-climbing if a standby helicopter had to be on site at all times?

By all means, PLEASE continue with your important studies and publish your findings as widely as possible, but ALSO try to treat us as being responsible and partially-intelligent people who deserve the same respect which you expect from us!

Yours sincerely
Peter Horne.

Reference

1 Horne P. South Australian diving fatalities 1950 - 1985. 2nd edition. Adelaide: Australian Underwater Federation, 1987

GROUPIE DIVING

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3 January 1990

Sir

The review of Australian and New Zealand diving fatalities by Edmonds and Walker is a valuable contribution to the epidemiology of diving medicine. Not only is the presentation of data first class, but the authors have appreciated that epidemiological work is not an end in itself, but that the data gleaned must be applied back to the situation being studied.

The difficulties experienced in interpreting such data are well illustrated by the buddy diving concept. Our problem is that we have no denominator. Whilst the majority of fatalities were associated with poor or absent buddy diving techniques, we do not know whether the breakdown of good buddy diving technique per se results in greater numbers of fatalities, or whether the proportion in this report merely reflects the overall quality of buddy diving techniques in sport diving. I suspect the answer to be the latter. However, it really does not matter, if Edmonds and Walker's view is correct that good buddy diving is likely to result in a non-fatal rather than a fatal outcome for an incident. There is, of course, no evidence for this, but it makes sense.

Unfortunately, what data we have does not help us to resolve this one either! What is clear is that training techniques for buddy diving have failed abysmally since it seems likely so many sport divers pay lip service to the principle. This implies that the training schools need to reassess the way this aspect of diving is taught. A further dilemma is the question whether solo diving is inherently more unsafe. Some divers (including myself) would argue that there are circumstances in which solo diving is an acceptable, safe technique. I think this whole issue needs very careful re-thinking by the educators in the sport diving industry.

Related to this, I want to pick on a particular bete noire of mine "Groupie Diving" (more than 3 divers together with a common leader or moniteur). The illogicality of this system, common to many SPUMS trips, is beautifully described by Edmonds and Walker in their section on buddy diving. There are several problems to Groupie Diving as it is run by many diving operators:

1 There is the implicit abdication of responsibility by the individual divers. This aspect is hotly denied by dive operators, but the "for we like sheep" mentality is assumed very rapidly. For instance.two dangerous incidents occurred during the diving at Uepi, before the SPUMS meeting at Honiara in 1987, arising out of this attitude.
2 There is an unacceptable level of risk acceptance for the dive leader. It is impossible to be truly responsible for 3, 4, or more divers at any one time underwater.
3 There is frequently no clear definition of individual responsibilities during the dive. Often only the leader knows the full dive plan and this may not take into account individual capabilities or wishes, etc.
4 There is considerable inertia in establishing a response to a diving incident. This involves bringing the problem to the dive leader's attention (distance, effort, intelligibility, etc.); checking all other divers, reaching a decision and finally, acting on that decision.
5 Responses to in-dive problems are often inappropriate. For instance, the designation of "low on air" divers to new buddy pairs (both low on air) for surfacing or the dive leader surfacing with the diver concerned and leaving the group leaderless or leaving him on the surface alone and then rejoining the group or ruining the dive for the entire group by surfacing everyone.

I believe that Groupie Diving is primarily commercially driven and arguments regarding its safety are merely a rationalisation of this process.

Whilst decompression sickness once again did not contribute to mortality, this is not to say it should be discounted. It is important to remember that sport diving decompression accidents carry a significant morbidity, as well as a major cost in their treatment and rehabilitation.

Finally, the discussion highlights the complex interplay of factors that contribute to diving accidents. It is very rare for one adverse factor alone to result in a tragedy. This being so, a rational approach to teaching dive accident prevention and management is feasible. This could follow the same broad principles as those underlying Bill Runciman's recent "COVER, A SWIFT CHECK" for an-

aesthesia practice presented at a meeting of the Faculty of Anaesthetists. Perhaps SPUMS and the dive training organisations should look at a similar concept for sport diving?

F. Michael Davis
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UNDER AGE DIVING

228 River Street
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20 October 1989

Dear Sir

I was recently put on the spot when a 12 year old boy (accompanied by his father) presented for a diving medical, stating that scuba diving was an accepted sport at his school.

My immediate reaction was "no way", and a couple of quick telephone calls to underwater medicine trained colleagues confirmed my decision. I explained to the lad and his father my decision that the boy was too young to use scuba and my reasons for making this decision.

My reasons why a 12 year old boy (and other people under 16 years of age) should be considered unfit to dive are:

a. This age group does not posses the maturity or confidence to avoid a sudden panic and rapid surfacing, thus undergoing the risk of cerebral arterial gas embolism (which can occur at depths greater than 1.5 m (4.5 feet).
b. This group does not possess the maturity to fully understand and implement the "buddy" system whereby a diver in trouble may be completely reliant on his "buddy".
c. Although there is little evidence to support the possibility of rapidly growing bones (such as in this age group) being more sensitive to dysbaric processes, there is a real possibility that diving at this age, even well within USN or BS-AC no-stop bottom times, may lead to dysbaric osteonecrosis.
d. Persons under 16 are often of small stature with greatly varied physical appearance, which will inevitably lead to problems with ill-fitting equipment and discomfort, which will probably be accepted as just apart of training. Discomfort often leads to disability and subsequent trouble.
e. At the completion of a diving course, irrespective of "limited" qualifications, persons of this age groups are liable to disregard their limitations and be tempted into diving situations outside safe diving practices. This may add their names to the long list of diving casualties or fatalities.

After contacting the school and finding out that scuba diving had been a Department of Education accepted Class C sport for Year 7 and above for 12 months, I was taken aback. However, I pursued my original line of action and brought the matter to the attention of the school principal and area State School Sport Administrator.

Having had some time to reconsider the matter, I believe the appropriate response would be:

1. have any diving candidate, but specifically one under 16, examined by a doctor with recognised expertise in Underwater Medicine;

2. require that the candidate is sufficiently physically robust for the rigorous aspects of diving;

3. ascertain that the candidate is mentally mature enough, i.e. has the common sense required for safe diving practice and not be tempted to use his gained skills unwisely in the future;

4. be restricted to buddy line diving with an experienced older diver until requalifying at age 16; and

5. keep well within the BS-AC tables as the rapidly growing bone of the under 16 age group may be unduly sensitive to dysbaric effect.

In retrospect, I would still fail a year 7 student for school scuba diving even if he fulfilled the listed criteria as I think passing such an individual would be discriminatory and create undue peer pressure which may affect safe diving practice.

Colin Macdonald
MBBS LCDR RANEM

STATEMENT ON SPORT DIVING

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31 October 1989

Sport diving has become big business. There are major commercial interests that service the sport diving field, including the provision of gear, instruction of new divers through schools and the organisation of diving related holidays. Sport divers have begun to diver deeper, longer and more often, with the use of increasingly sophisticated gear. The dividing line between commercial and personal diving has become progressively less clear as the capabilities of sport diving equipment have increased. Some sport divers,