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
Senior Lecturer in Anaesthesia

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

The Diving Medical Advisory Committee
28/30 Little Russell Street
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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,

tempted by the rewards of salvage, dive on deeper wrecks in the hope of turning their sport into a lucrative pastime.

Sport diving casualties account for the vast majority of diving injuries treated throughout the world. Recent trends in the numbers and types of diving casualties have created increased concern among members of the medical community and of this Committee. New scientific evidence heightens our concern that permanent central nervous system damage occurs following some incidents of neurological decompression sickness. Also of concern are the potential effects on other systems, notably the skeletal system, in the form of dysbaric osteonecrosis. These kinds of damage, while subclinical in most cases, may lead to serious long term disability and are, for the most part, avoidable with a reasonable degree of caution.

Whilst the majority of sport divers are considered to be well trained and responsible, there appears to be a prevalent philosophy among some that they can dive deeper, longer and more often without penalty., The following points are stressed:

1. The depth limit for North Sea commercial diving on compressed air is 50 metres. This depth is based on safety considerations and a recognition of the increasing risks to divers at greater depths. In a commercial situation, dives conducted at depths in excess of 30 metres are carefully controlled and normally require a recompression chamber on site as well as full supervisory backup. It is stressed that sport divers should never exceed 50 metres and that, in isolated areas or in the absence of proper supervisory personnel, a shallower depth is recommended. Thirty metres is considered a reasonable depth limit for most sport diving activity.

2. The single most identifiable cause of decompression sickness and other diving related problems is the time depth profile of a dive. Multi-day repetitive diving increases the risk of an incident. While a decompression incident can occur following a dive within the established limits of any table, dives involving decompression stops in the water are at an increased risk compared to dives conducted within established no stop times. Careful planning and execution of a dive remains the best way to avoid a diving related problem.

3. Dive only on well tested and accepted tables and stay well within the guidelines of these tables. Great care must be exercised in the use of decompression computers. Where used, they should be as a backup to a properly planned dive on accepted tables. Consideration must be given to known risk factors such as age, fatigue and degree of fitness. Never push a dive to the limits of your table and avoid incurring a decompression stop requirement if possible. No stop diving is recommended for most sport diving activity.

4. Diving is an exciting but potentially dangerous sport. Each year a number of divers die in diving related accidents. Others are left with a permanent disability. Decompression sickness is not an innocuous disease. Although the majority of divers appear to recover normal function following treatment, the end result in some cases is likely to be underlying central nervous system damage of a permanent nature.

5. Carefully planned and executed, diving can be a safe and enjoyable sport. Experience alone will not protect you and may lead to a false sense of security. The potential risks of diving must never be forgotten.

The Diving Medical Advisory Committee

1251 East Dyer Road #100,
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November 28, 1989

Sir

We have followed with interest your reprint1 of the Robert Monaghan *Undercurrent* article and the one published in the *SPUMS Journal* [2]regarding diver population and accident rates.

As those articles have shown, PADI and others have repeatedly refuted his claims and his misuse and misrepresentation of certain data. This final chapter deserves comment as well.

To put his “analysis” in perspective, the following are but a few of the misrepresentations Monaghan has made in his reports:

1. Monaghan claimed a PADI survey indicated an 80% annual diver drop-out rate. Actually, PADI’s survey reported the opposite, that the drop-out rate could **not** be 80% (Monaghan was informed of this misrepresentation but has continued to make it).

2. Monaghan claimed that published Australian diver fatality rates should be proof that published US rates are too low. What he did not share with readers was that the Australian rates he quoted were not total fatalities compared to total diver population (as the US rates are computed), but instead the total fatalities compared to the number of divers certified in a year by PADI Australia. Such a ratio would obviously be higher than the figures reported in the US.