SAFER SURFACING

Dr A G Slark

“What time is high water?”
“Haven’t a clue.”

This exchange between two divers, both boat owners at that, typifies the attitude of too many towards the sea. Ignorance and lack of concern for the basic information about the intrinsically hostile environment which divers wish to enter is a continuing cause of accidents.

Every year, more people take up diving without having previously been involved with any other water sport. Furthermore, the increasing professionalism of diving instruction tends to promote the early acquisition of sophisticated and expensive apparatus without any ‘apprenticeship’ in the free diving. These trends will develop a generation of divers of whom many will be less conversant with the moods of the sea.

Diving fins and suits give an insulation from cold and manoeuvrability and speed in the water which compares most advantageously with the swimmer not so well equipped. This inevitably leads to an exaggerated impression of capability in the water, although swimming speed is still very slow in real terms. For instance, the speed of 1 knot is near the maximum average sustainable. This is about 30 metres per minute. The speed of 40 metres per minute cannot be kept up by the average diver for more than a very short period.

These figures are for divers without the encumbrance of apparatus. An inflated buoyancy compensator will diminish this swimming speed. A sack of crays or scallops will reduce it much more. The significant point about this is that tidal streams of 1 knot or more are very common throughout New Zealand. Furthermore, as the speed varies by the hour, it is possible to enter the water on a slack tide and emerge when there is a greater set than can be swum against. Also, the maximum stream varies day by day, so that what is completely safe during neap tides may be highly dangerous during spring tides. The places which divers are likely to find most interesting to dive at are also those places which experience strong tides. Tidal effects are greatest off rock promontories, particularly if the rock faces are steep. Rock pinnacles and archways will also funnel the tide. Another factor which has to be borne in mind is that on the bottom the tidal effect is much less than on the surface, so that the diver’s maximum physical effort may be required when he has completed his time under water and when he may be most tired.

Recently, a diver was admitted to the RNZN Hospital suspected to have been suffering from a bend. She stated that she had been diving to about 70 feet for nearly half an hour and, following the dive, had needed to swim for 30 minutes to get back to the boat. She was not found to be suffering from a bend, but was in a state of complete physical exhaustion. This is hardly surprising in view of the very considerable effort which she had been faced with throughout her diving. It must also have been associated with a great deal of anxiety. She made it back, but only just.

This time last year, a diver under somewhat similar circumstances, did not. His body was recovered on the bottom after his buddy had swan back for assistance to the boat - which was obscured from vision, on the other side of the headland - after they had surfaced from their dive, feeling very tired.

Although a diver’s swimming speed is small, the distance covered during a short dive may be quite sufficient to take him beyond the range of vision of his support vessel.

There are few of us who have not at some time or other sat in a boat, anxiously scanning the distant horizon for two small heads one had last seen entering the water some 40 minutes before. Likewise, most of us have had the experience of surfacing behind a support boat which seems to have sailed without its most important passenger.

Diving in a tideway, or upon a submerged reef, adequate surface support for a diver is of even greater importance. Furthermore, if divers are likely to be carried away from the support boat, some method of increasing the visibility on the surface should be carried. In the Navy, all divers have a smoke and light-flare attached to their diver's knives, which is replaced periodically to make sure it is functioning when necessary. Although such a system may not be suitable for an amateur diver, some form of inflatable buoy or small flag in rescue orange could easily be carried by the diver in such a way as to increase his visibility on the surface. I have noted that divers also tend to over-estimate how readily they may be seen on the surface. In addition, light conditions and the state of the surface water may change quite dramatically during the course of even quite a short dive.

Records of diving accidents reveal repeatedly how important the interval between surfacing and getting back aboard is. If prolonged, any disorder provoked during the dive will be exacerbated. The chances of becoming bent, for instance, are greatest immediately after surfacing, and are increased by strenuous exercises such as swimming. Furthermore, none of the diving tables were designed or tested with such a pattern of activity in mind. Greater risks, therefore, are taken by the diver who enters the water from the shore, using scuba apparatus. Yet this is just what the novice may rush to do with his brand new gear. All divers, both veteran and novice, must dive within the limits of their capability, both with regard to experience and physical fitness, and relate these qualities to the conditions likely to be experienced when back at the surface.

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EXERCISE, LIKE SEX, SHOULD BE REGULAR, SAYS DOCTOR

Dr Harry Lander, at the University of Adelaide, has spoken up after a couple of health-seeking joggers fell dead after their exertions recently. He said that a lot of people are seen in the Adelaide Hospital who have discovered that they have pushed it too far. The most strenuous exercise most people take, he commented, is regular breathing. He added "it's the same with sexual intercourse, you've got to keep at that, otherwise you can drop dead there too". He gave his exercises as breathing and flying.

Naturally the National Heart Foundation doesn't accept this defeatist talk. Dr John McPhie, Medical vice-president, replied that "there is ample evidence that people who exercise have a lower incidence of heart attack. The sudden death of a 25-year-old can happen in front of the television just as easily as while jogging. It depends on whether there is an existing predisposition."

It is not certain whether divers let all aspects of their health become neglected, but it is best to keep the above advice in mind .....