Breathless Down Under

How inattentive divers get into air trouble

Two recent articles by Dr. Christopher J. Acott in the South Pacific Underwater Medical Society Journal *survey the results of a study of incidents in Australia and New Zealand in which divers ran out of air, as well as a test of divers' knowledge of equipment checkout procedures. Dr. Acott is with the Hyperbaric and Diving Medicine Unit, Department of Anesthesia and Intensive Care, Royal Adelaide Hospital, North Terrace, Adelaide, South Australia. Both this article and "How We Mess Up" on page 6 are adapted from Dr. Acott's articles.* In Depth *takes all responsibility for editorial changes in this article.*

Diving is an equipment-oriented sport in a dynamic environment; your safety depends on your knowledge of the risks. Although some diving accidents are unforeseeable, as many as 90 percent are due to diver error.

A diving incident is any error that impairs diving safety. Most errors are trivial and can be caught before they cause harm. Being human, we can't eliminate all errors, but we can minimize their effects — especially errors of omission, repetition, or substitution, or those that are caused by inadequate knowledge or skills or from failure to follow rules.

Of the reports we analyzed, 19.5 percent involved an out-of-air problem; 35 percent of these resulted in injury or death.

The factors contributing to the first 1,000 incidents in the

Danger Down East

Arguments against weight-integrated BCs

Dear Delmar,

In the latest issue of *In Depth* (March 1996) you responded to another reader's query about weight-integrated BCs by saying that you like them and prefer them to weight belts. I think there are two good reasons why these systems may not be appropriate for all divers or diving situations, and that there is a further caveat to their use.

Here in New England (where the underwater visibility is not always the greatest) it is not uncommon to get tangled in fishing or lobster-pot line, making it sometimes necessary to remove your BC (especially if it is the regulator first stage that is tangled) to free yourself (yes, your buddy should be able to do this for you, but I prefer to be able to do a self-rescue if possible, and your buddy might also be tangled). Solving the problem and putting the BC back on will be an extremely difficult task if removing your BC makes you 20–30 pounds buoyant.

Divers who need assistance getting in and out of the water should consider the burden these systems put on the people helping them. For many years I have been actively involved with the Moray Wheels, a dive club dedicated to promoting diving for people with physical disabilities (often with spinal cord injuries, but also amputees and people with diseases such as cerebral palsy or spina bifida). The usual practice is to get the disabled diver to the water's edge (or the stern platform of a boat) and bring their gear to them. A single unit weighing perhaps 70 pounds (30 pounds of lead is not unusual in our cold waters) is MUCH harder to move around than two separate pieces (BC/tank/regulator and weight belt) each weighing about half that.

As for the caveat: Anyone (no matter how able) using a weight-integrated BC should, for their own safety, make certain that their buddy (and anyone else in the dive group who will listen) knows exactly how to release the weights in an emergency. Personally, I prefer a weight belt — anyone can easily release that if, for some reason, I should become unconscious.

Peter Vernam
Nahant, MA

Excellent points to bring up, Peter. While the main advantages of weight-integrated BCs are enjoyed with tropical diving, they are not without merit in coldwater diving. To avoid ending up a dive shaped like a U from the 67 pounds strapped around my middle, I've split the difference: I wear a portion of the weight on my belt and the rest in the BC.

Delmar Mesa