



opinion

Text by Mike Ange

Is diving safe? This is a question as old as the sport itself and the potentially accurate answers fill an entire spectrum of responses. Over the past 17 years, I have studied this question intently, publishing numerous case studies and articles in addition to several books. In the last third of that period, this study was for the purposes of an academic paper in a degree program. Here is the definitive answer: It depends.

Diving is no doubt one of the safest of the adventure sports in terms of the occurrence rate of injury. Diving is also deadly. When we isolate incidents resulting in injury as compared to other sports, you are more likely to die from a serious diving injury than you are from most other injuries occurring in many other sports. The funny thing about statistics is that they are like a wetsuit: What they cover up can be just as interesting as what they reveal.

Perhaps a better question is: What can be done to make the sport safer? Regardless of how safe our sport is today,



Analyzing the Obvious:

It's About Anticipation

few would argue that reduced rates of injury or death would be a good thing. Many proponents of more regimented or more rigorous training will say that training is the key. Training agencies struggling to stay afloat in an increasingly competi-

tive marketplace strive to balance the ease of access to the sport with some ever-shifting perception of safety. Neither party is correct; they are merely somewhat opposing viewpoints.

Examining the facts

Tracking two groups of over 100 divers over two separate 10-year periods of diving supports the theory that accidents are statistically insignificant in our sport. Roughly half of these divers were trained

using an older, more regimented and most would argue more rigorous training regimen. The other half were trained after a significant shift in training standards that occurred in the 1990s, resulting from an effort to lower the bar to allow more

PETER SYMES





Anticipation

diving. The dropouts in the short training group averaged less than 10 dives, with many never completing a fifth dive in their short diving careers.

Lack of comfort zone

The reasons for the lack of comfort zone are much more difficult to ascertain, and in fact, come down to only educated opinions that are hard to validate reliably. In my opinion, divers are uncomfortable diving because they lack an ability to anticipate.

Human beings are comfortable doing what they know. We are comfortable responding to situations with known outcomes. If we drive, we are comfortable in our ability to create cause and effect in our control of the automobile. If

we hit the brake, we stop before striking the car that stops in front of us; if we accelerate, we move out of the path of an oncoming vehicle; and if we turn the wheel, we can follow a safe course with our vehicle. We may become overconfident, or too comfortable, and certainly that creates a risk of accident and injury. But overconfidence will almost never stop a driver from sitting behind the wheel.

Now imagine taking the wheel but not knowing what each pedal will do, which one stops you and which one makes you go. Imagine a world where every country used a different standard for automobile manufacturing. Some placed the clutch in the middle, some on the right. Some placed

divers to come into our sport.

The number of divers involved in accidents from the study is insignificant in each population and none of those accidents were fatal. In fact, over the two 10-year periods tracked, more divers were removed from the study as a result of cancer, heart disease and automobile accidents than diving—by far. However, an interesting fact resulted from the research that was not an anticipated outcome, and this result does in fact relate to the health of diving—not the individual health of the diver, but the health of the sport itself.

In this limited study, there was a direct correlation between the dropout rate of divers and the type of training received. Follow-up interviews linked the reason for diver drop out to the diver's comfort zone.

Instructors from nearly every training agency use materials that discuss the diver's comfort zone and the importance of diving within that comfort zone. However, it seems that in at least some cases, we may not be creating a comfort zone large enough to allow some divers to participate at any meaningful level in our sport.

Indications are that divers in compressed training programs with fewer skills required are 30 percent more likely to leave the sport than those in the longer more traditional programs of old. While it is tempting to link this dropout rate to other issues—like competing sports, economic indicators and more nebulous indicators like the “mindset of the millennial” diver—in truth, the divers themselves linked their own exodus from the sport to “being uncomfortable”, feeling “threatened by the environment”, or as one said, being “afraid I would die during every

minute of my dives.”

These responses do not engender a vision of competently-trained divers operating within an established comfort zone. The dropouts from the earlier training group cited a number of other reasons, including the requirements of marriage and family, jobs, economics and proximity to good diving as they aged. Not one person from this group cited a belief in his or her capabilities as a diver among the causes for dropping out, except for those that had a significant medical event that left them medically unfit for



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opinion

the throttle control on the left and others in the center. Some brakes are foot brakes and others are on the wheel. All of the controls are shaped differently and it is up to you to determine which one is which and how it works. In short, you have no ability to anticipate the outcome of activating any control. Would you feel safe hop-

ping onto a high-speed motorway directly out of the rental car lot, or would you require some time to get accustomed to how the car will respond?

To a much lesser extent, many of us experience a similar situation when traveling between countries that drive on the right and those that drive on the left of the

motorway. Even though the function and orientation of the controls is the same, this seemingly minor change shakes our ability to anticipate the outcome of our actions, even though we have a solid frame of reference for those same actions—just on the other side of the road and perhaps the other side of the car.



The new diver

Now as experienced divers, let us step back and examine how we all started in the sport. Our new diver: is encapsulated in bulky unfamiliar equipment; her head is filled with her parents' warnings about falling into the pool as a child; his memories include news reports of drownings, perhaps recent drownings, perhaps a diver drowned. That first breath underwater is—AMAZING—and over 90 percent of them will love it.

Then they try to interact with those new and alien surroundings, but nothing works, as it should. Gravity is now a fickle mistress that cannot be relied upon. Your feet do not propel you as they did in your comfortable surface world, and the very process of breathing—something you do about 1,000 times an hour in your world—now feels alien.

Every single diver experiences

these sensations the first time they breathe underwater, and every single one responds to it differently. The athlete, the swimmer, those that have experiences like military training, will immediately embrace the differences and they will adapt quickly. Others may have a fear of the water, perhaps even an irrational fear. I have had students enroll in dive classes as a way to overcome those fears. In between these two groups, there is an entire spectrum of potential divers, and they all have one thing in common: To feel comfortable in the water, they need time to adapt, and positive reinforcement from a competent coach.

The amount of time and coaching required will vary dramatically, but it is still required. In short, these divers need practice, and the more time we allow for practice, the more comfortable they will become in a pool-like environment.

Transition to open water

The transition to open water also opens the mental images of great wonders, and for many new divers, a fear of astounding horrors. Take away the diver's sight with poor visibility, and we increase the feelings of the unknown. Add a limited background knowledge of the environment, and we expand the fears again.

Most instructors have seen divers that are extremely competent in confined water drills but revert immediately to bad habits and lose control in the open water. If you think about it in these terms, this is understandable. Stress degrades even the most practiced skills, much less those that may be rushed and compressed into a three-day open water class. The diver once again has no ability to anticipate the outcomes of his or her actions, and this can make the transition



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Anticipation

should be fun, so take your time to enjoy it.

- You should plan a minimum of about 8 hours of your time to complete the academic modules whether home study, classic instruction or a mix.
- Planning about 12 hours for water sessions (including deck time) is a good start point, but be prepared to extend if you need the time.

- And never hesitate to let your instructor know if you need more time.

The next article in this series will address how the ability to anticipate aids in problem solving, even if the problems cannot possibly be anticipated. We will discuss what drills can be used within the restrictions of modern training to improve problem solving ability and therefore expand the diver's comfort zone. ■

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both a challenge for the instructor and an absolute horror for some divers.

The good instructor will be patient, will positively reinforce and most importantly will be willing and able to invest the time to allow this transition to occur as naturally as possible. This is how we expand the comfort zone.

Many of us have seen student divers passed through courses where they met the skills standards, but it was apparent that they were terrified though the entire process. Statistics in the real world verify what the best instructors have always known: A student who passes a dive course in this manner is not really a diver at all and is very unlikely to ever be a diver.

It is a long-held tenant in business that it is easier and cheaper

to keep a customer than it is to recruit a new one. So, not only are these minimum practices bad for the prospective diver, they are also bad for the instructor, the facility and the sport itself.

Pre-planning fixes

Fortunately, these are easy issues to address with a little pre-planning.

As a facility owner or instructor:

- Never plan courses to the minimums, in terms of time and instructor resources. In 80 to 90 percent of all classes, you will need to extend this time to address the needs of every student.
- Allow for a little one-on-one time for students who need special attention.

- Be observant and never depend on the student to tell you when he or she is struggling.

- Be proactive and step in to provide the assistance needed. An uncomfortable diver may not be statistically a higher safety risk, but they will never be a loyal customer, so invest the time and effort in our sports greatest asset!

As a potential student diver:

- Avoid facilities that focus on how "quickly" you can be certified. It may sound good in terms of balancing the pursuit of diving with your other activities but planned "quick" classes are in reality ineffective if that is the sole focus.
- Additionally, remember this is a sport and even the training



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