

# TRAINING

Phil was going deeper than he had ever been before. He had just entered the world of technical diving — newly certified in the special techniques and practices it took to make a successful dive beyond recreational depths — and he was close to 170 feet deep. He couldn't wait to tell all of his diving friends and convince them they needed to seek out the training as well. And then he inhaled, but nothing came.

## The Diver

Phil had been diving recreationally for years. The entire time, though, he wanted more. Finally, the world of technical diving was opening up new opportunities for him. He had recently completed his technical training but hadn't done much diving beyond recreational limits yet. He had also just purchased a set of technical gear and was itching to put it to use.

## Lessons for Life

## The Dives

The shipwreck rested at nearly 200 feet and was about an hour-and-a-half boat ride offshore. Phil wanted to make a dive there ever since he saw it profiled in a magazine. He made the trip alone and found a dive buddy on the boat, learning they both had the same goals. Phil's buddy was a bit more experienced than he was, but they figured they would be compatible enough, so they planned to make the dive together. Both divers were carrying three gas mixes on the dive.

They would use one mix, their travel gas, on the descent to the bottom. It was simply "air" in a smaller tank Phil had mounted on his left side. The second was for the actual dive, called a bottom mix. This was trimix, a specially combined mixture of nitrogen, oxygen and helium. This mixture — 40 percent nitrogen, 17 percent oxygen and 43 percent helium — would give them adequate oxygen without becoming toxic at depth, along with minimal narcotic effects from the nitrogen and ease of breathing from the helium.

Both divers carried the trimix on their back in a set of twin tanks called doubles. The third gas they carried was 80 percent oxygen, which they planned to use during their decompression near the surface. Phil carried the oxygen in a tank hanging from the right side of his dive rig.

According to the dive plan, when the divers reached the top deck of the wreck at around 150 feet, Phil would switch to his bottom mix. He would continue the dive using the gas on his back until he reached his planned time, or remaining pressure, and then he would begin his ascent. He was to switch to the decompression gas when he reached his stop depth and complete a series of stops that would allow the nitrogen to escape from his body. The dive was planned using special decompression software.

## The Accident

When Phil and his buddy began their descent, Phil realized they weren't as compatible as he thought they might be. They used different hand signals as soon as they dropped below the surface, and Phil didn't quite understand what his buddy meant. Phil's new buddy also descended much faster than he was ready to go. Within just a few short minutes, Phil lost track of his buddy altogether. That didn't matter though, because at the same time he realized he was on top of the wreck, the place he had dreamed about for years. Between the narcosis brought on by breathing air at that depth and his excitement at reaching his goal, he forgot to switch to the bottom gas. His travel gas for descent was intended for only a short duration, and he quickly ran out of his supply.

He went from euphoria to panic in just a moment, and the only option in his mind was to swim for the surface, but he never made it.

## Analysis

Technical diving requires a tremendous amount of equipment to ensure a safe dive, as evidenced by the three different gases Phil carried on this dive. Each gas had at least one, if not two regulators that would provide backup in case of failure. But buying all the equipment in the world doesn't take the place of training, experience and following a well-crafted dive plan.

Phil had a dive plan, but he failed to follow it. Nitrogen narcosis has varying effects on people, but there is no question that air becomes narcotic at depth, especially at a depth of six atmospheres (165 feet) or more. In Phil's case, he forgot all about switching to a breathing gas with a reduced concentration of nitrogen that would have helped him keep his head.

The most important thing about that switch, though, was that he had his bottom gas in much greater supply than he did his travel gas. If he would have had the presence of mind to switch to his bottom gas, he would have been fine. The combination of the nitrogen narcosis from the depth and suddenly running out of air limited his options dramatically. It's not possible to know exactly what went through Phil's mind when he took his last breath. Probably he panicked, leading to perceptual narrowing and a fight-or-flight response that would cause Phil to attempt to flee to the surface. The only thing known is that he drowned at depth. When his body was recovered, the tanks on his back holding his bottom gas were still full and his travel gas was empty.

Phil's dive buddy didn't realize Phil was missing until he began his own decompression stops. There was nothing he could do at that point, having more than a half-hour of obligated decompression before he could reach the surface and alert the dive boat. It took searchers two days to recover the body.

## The Dangers of Narcosis

Why training and experience can help you keep your head while tec diving ■ ERIC DOUGLAS



MICHAEL MORGENSTERN

## Lessons for Life

- 1 Seek training. Before attempting any new type of diving, you should seek appropriate training. The more complex the diving technique, the more time you will spend in training.
- 2 Have a dive plan and follow it. It's important to understand the limitations of your dive and follow your plan.
- 3 Stay with your buddy. Diving is a social sport and the shared experience is what makes diving exciting. Buddies can also help should you get into trouble on a dive.
- 4 Discuss details like appropriate communications with your dive buddy. When you are diving with a new buddy, you should always discuss diving techniques, planned descent speeds and communication techniques.
- 5 Don't let a goal cloud your judgment. No dive is worth dying for. Use your head when making a dive. Don't let your desire to achieve a goal get in the way of making a safe dive.

Eric Douglas is the director of training for Divers Alert Network. He also co-authored the book *Scuba Diving Safety* and has written a series of dive adventure novels and short stories. Check out his website at [booksbyeric.com](http://booksbyeric.com).

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