

# TRAINING

It had been almost two years since Don and Jane last went diving, but they were happy to be back in the water. The chance to get wet came together quickly, without having ample time to prepare. Suddenly, they found themselves halfway through their dive, cruising over a gently sloping reef. Jane was starting to relax, remembering how much she loved the sport. As she inhaled through

her regulator, she felt the cool, dry air enter her lungs. As Jane stopped inhaling, though, the air didn't stop coming. Suddenly Jane got scared.

## The Divers

Don and Jane had been certified for about 10 years, but neither had received any further training since their initial certification course. They dived when-

ever they could, mostly in tropical locations. But the past couple of years had been tough financially, and the pair hadn't been diving in some time.

## The Dives

The opportunity to dive suddenly arose when Don and Jane ran into an old friend from their dive club who told them about an upcoming weekend trip — two days from then. There were two openings, the price was perfect and they jumped at the chance to go. They barely had time to make the necessary arrangements. Don grabbed their dive-gear bags off a shelf and checked through them to make sure everything was there. He was relieved to see that everything was where he packed it after that last trip. They were excited to be on a dive boat that morning. The dives were typical for the area, with shallow depths between 40 and 60 feet.

## The Accident

Don and Jane were cruising along the reef in about 50 feet of water. There was a current running across the dive site and neither diver had gotten much exercise lately, so they were both breathing a little harder than expected. Don had wandered away while Jane stopped to look at a coral formation. As Jane inhaled she got a normal breath, but immediately after that, her regulator began free-flowing. Air bubbles surrounded her face. She tried to breathe, but the air was coming too fast. Jane panicked. The rush of incoming air had her scared, so she wasn't thinking clearly. She was only thinking that she was going to run out of air. Jane didn't know where Don was, so she did the only thing she could think of — bolting for the surface, spitting out her regulator as she went. Jane never made it to safety. She lost consciousness before reaching the surface. She stopped swimming and floated back down to the bottom. Don

was the first to reach Jane and brought her to the surface. Resuscitation efforts on the boat were unsuccessful.

## Analysis

This dive accident began long before Don and Jane left for their dive trip. After a layoff of nearly two years, the divers jumped back in the water without taking the time to prepare their gear and have it properly serviced, or prepare themselves to dive again. After the last dive trip, they packed their gear away and hadn't looked at it since. It sat idle in the garage next to their lawnmower and suffered through temperature extremes. But maintaining dive gear isn't as simple as maintaining a lawnmower — and shouldn't be treated as such. Without annual servicing — even when it's not being used — the O-rings and seals in regulators can dry out. This can cause the regulator's diaphragms and valves to malfunction, leading to increased breathing resistance, slow response with each breath, or even a free-flow. Had Don and Jane taken the time to have their gear serviced before taking the trip, the problem might never have happened. Annual servicing is as important to a diver's safety as it is for the equipment's warranty.

Dive gear, especially regulators, has become dramatically more reliable through the years. The likelihood of a regulator's catastrophic failure — assuming the gear is appropriately serviced — is minuscule. Modern scuba regulators are known as “downstream valves.” That means if they malfunction, they'll continue supplying air, compared with

older regulators that would shut off air when they broke. Scuba regulators are demand valves, supplying air when the diver inhales — demands — air. When that valve can no longer properly function, it will stick in the open position. While a free-flowing regulator constitutes an emergency, it's certainly better than an instant out-of-air situation.

Some divers learn to breathe from a free-flowing regulator during their initial open-water training. But most never practice this skill again. By holding one bite tab from the mouthpiece between her teeth and allowing the excess air to escape from her mouth — instead of rejecting her regulator — Jane could have cautiously breathed from the air bubbles.

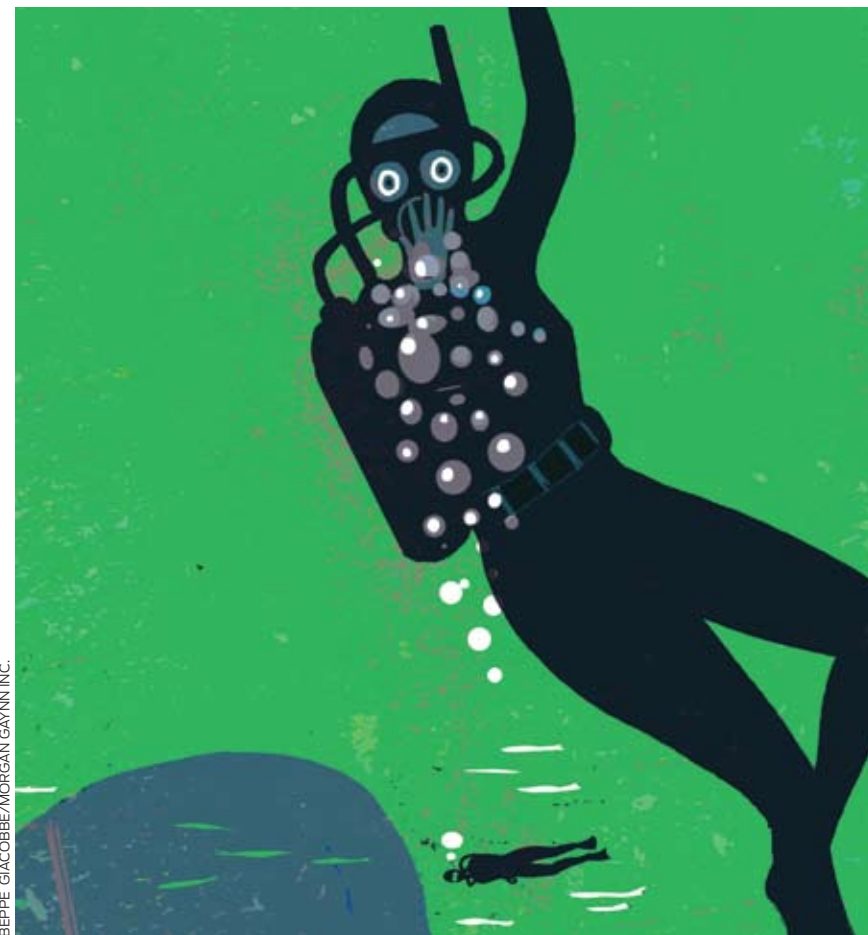
**If Don and Jane had had their gear serviced before the trip, the problem might never have happened.**

If she had remembered how to breathe this cautiously, she could have swam to her buddy, or made a safe ascent.

If Don had been close by, he could have easily donated his octopus regulator to Jane and turned off her air to keep if from being totally depleted. Their dive would have been over, but they could have dived again later. While all divers wander away from their buddies from time to time, it's important to stay reasonably close and to make sure you have an idea where your buddy is at all times. In the event of an emergency, you might not have time to look around.

## Lessons for Life

By not properly servicing her gear after a long dive layoff, Jane pays a heavy price. This is a true story, but the names have been changed. ■ ERIC DOUGLAS



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