



Atlanta Underwater Explorers

AUE Bubbles

May 15, 2016
Volume 4 Issue 3

The Atlanta Underwater Explorers, P. O. Box 55048, Atlanta, GA 30308 www.diveaue.org

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"You can never be too prepared and it is a great idea to at least think about potential problems and how to handle them"

15 MOST CHALLENGING EMERGENCY SCENARIOS FOR SCUBA DIVERS

[ScubaDiver](#) | November 5, 2015 | [Diving Tips](#), [scuba diving safety](#)

Most divers are generally aware of the risks involved with scuba diving and take the proper steps to avoid them.

There are, however, times when for whatever reason things get out of whack and the unlikely may occur. You can never be too prepared and it is a great idea to at least think about potential problems and how to handle them if the "unlikely" should happen while diving.

The following article examines some of the most challenging scenarios a diver could possibly experience while diving. Each risk is examined and discussed as it relates to the possible cause, probability of occurrence as well as suggestions for avoiding them. Most importantly the piece also goes into what to actually do if you find yourself facing any one of these 15 perilous challenges while diving. *Read on for more about managing these risks below.*

Stuck Auto-Inflator Valve

Pausing to make that minor adjustment to your buoyancy, you gently press the auto-inflate button of your buoyancy compensator (BC). Instead of adding just a "puff" of air, the valve jams and begins to empty the contents of your cylinder into your BC. It's think fast, or face an uncontrolled ascent.

Risk Factor: Rapid or uncontrolled ascent, with attendant risk of pressure-related injuries.

Likely Causes: Probably the most common cause of a stuck BC inflator valve is poor or neglected maintenance. Some divers just don't give their BC the post-dive attention it deserves. If a BC is not rinsed or soaked after diving in salt water, salt crystals and mineral deposits can form that can later cause the valve to stick in the "on" position. Another potential cause of a stuck BC inflator valve is sand, silt or other sediment in the valve mechanism. This can occur if the device isn't properly secured and drags on the bottom.

Avoidance: Proper care of your BC goes a long way toward preventing stuck inflator valves. After each dive, or each day of diving, thoroughly rinse and/or soak the BC in fresh water to dissolve any salt crystals and to remove sand, silt and other debris.

Dealing with It: The fastest way to solve the problem of a stuck inflator valve is to disconnect the low-pressure hose from the inflator. Failing that, grab the lanyard for the dump valve and hold it open. Should an unwanted ascent begin, continue venting the device, and flare your body to maximize drag and slow your ascent.

15 MOST CHALLENGING EMERGENCY SCENARIOS FOR SCUBA DIVERS - CONT.

Grabbing hold of a stationary object such as an anchor line might allow you to sort the problem out and regain buoyancy control.

BC Won't Inflate

While making a descent you realize you're a wee bit heavy, so you try adding air to your BC. Nothing happens, and instead you get that sinking feeling as you begin to accelerate toward the deep blue beyond.

Risk Factor: Loss of buoyancy control, uncontrolled descent, with attendant risk of exceeding depth limits.

Likely Causes: Several problems can result when an auto-inflator fails to inflate a BC. The first and most obvious is that you forgot to attach the low-pressure hose to the inflator. The second is that you ran out of air, but we'll discuss this later. A third possibility is a mechanical malfunction or failure of the inflator valve.

Avoidance: Carefully check your dive gear prior to entering the water to verify that the low-pressure hose is connected to the inflator, and then verify that the device actually works. Recheck it once you're in the water to make certain the hose wasn't disconnected by the force of entering the water. To avoid mechanical problems with the valve, thoroughly rinse your BC after diving, and take it to your local dive center for professional maintenance at least yearly.

Dealing with It

if the low-pressure hose is disconnected, reconnect it and your problem should be resolved. Plan "B" is to use the oral inflator to add air to your BC. (This is a skill that should be practiced.) Finally, if you've got that sinking feeling and can't correct the problem quickly enough, ditch enough weight to establish neutral buoyancy.

Regulator Free-flow

Everything is going fine when suddenly your regulator erupts, spewing out the contents of your cylinder.

Risk Factor: Difficulty breathing, rapid exhaustion of breathing air supply.

Likely Causes: Regulator problems such as free-flow generally stem from poor regulator maintenance and are made worse by moisture in the cylinder and cold-water temperatures. As compressed air expands in the regulator, the temperature drops, which can cause moisture in the air to freeze. This in turn can unseat a valve. As regulators get cold from air expansion, ice can form on exterior components as well. Incorrectly set inter-stage pressure can also make a regulator prone to free-flow.

Avoidance: Proper maintenance is critical to regulator reliability. Regulators should be properly rinsed/soaked, to prevent the buildup of salt and mineral deposits that can foul up the valves. Rinse or soak your regulator after each dive, and have it serviced by a professional technician annually. Before diving in cold water, make certain that the regulator has been serviced for cold water, and that the cylinder has been properly serviced and filled.

Dealing with It: While it is often possible to continue breathing from a free-flowing regulator, some divers will experience difficulty due to the torrent of bubbles. If breathing from the free-flowing regulator is not possible, switch to a redundant air source or share air with a buddy. Shut off the cylinder valve to conserve air and stop the bubbling, and make a controlled, normal ascent to the surface. You may need to orally inflate your BC if the cylinder air has been turned off.



"If you got the sinking feeling and can't correct the problem quickly enough, ditch enough weight to establish neutral buoyance."



15 MOST CHALLENGING EMERGENCY SCENARIOS FOR SCUBA DIVERS – CONT.

Accidental Weight Loss

You're roaming the reef, minding your own business, when you become buoyant.

Risk Factor: Most people welcome unexpected weight loss, but not when diving. Whether it's a loss of a weight belt, trim weight or individual weights from a pocket belt or integrated weight system, losing weight generally leads to an uncontrolled ascent, possibly of the rapid nature. This can lead to lung over-expansion injuries such as arterial gas embolism (AGE) and can contribute to decompression sickness.

Likely Causes: Loss of weights when diving can be the result of poor or neglected maintenance, mechanical failure or poor operating procedures.

Avoidance: A thorough inspection of your weight system prior to diving is the first step in avoiding accidental weight loss. Look for telltale signs such as worn Velcro fasteners and stitching, worn buckle teeth, and faulty release mechanisms. When using a conventional weight belt, make certain that the strap length is appropriate. There should be 4-6 inches of extra strap remaining when the buckle is secured. Less than that, and there may not be enough to grip to make underwater adjustments. Too much excess strap can lead to entanglements. During the dive, monitor your weight system, and adjust the belt tension as necessary.

Dealing with It: The first step in dealing with an accidental weight loss is to counter the effect by dumping air from your BC. If you're at the bottom and can find something to hang onto, it may be possible to retrieve and replace the lost weight and continue the dive. If an uncontrolled ascent begins, flare your body to maximize drag and slow your ascent, vent air from your BC and remember to exhale during the ascent.

The full article covers an additional 10 of these types of scenarios listed below

Out of Air

Wet-Breathing Regulator

Separated Mouthpiece

Blown Deco Stop

Can't Find the Dive Boat

Unfamiliar Buddy

Lost Buddy

Unfamiliar Equipment

Jammed Reel

Entanglement or Entrapment

[Read the full article here on infolific.com](http://forclubadivers.com/scuba-diving-safety/15-most-challenging-emergency-scenarios-for-scuba-divers/)

<http://forclubadivers.com/scuba-diving-safety/15-most-challenging-emergency-scenarios-for-scuba-divers/>



Examples of divers in distress

Boat-Diving Safety Considerations



NEW TO SCUBA

Boat-diving safety considerations are important, as diving [this way](#) often provides the easiest and most efficient access to dive sites, as well as opening up a world of magnificent [reefs and wrecks](#) that we might not otherwise have the chance to visit. Boat diving can mean a single morning spent on the ocean or an extended stint on a live-a-board charter. Whatever it means to you, there are several particular safety considerations to bear in mind when diving from a boat in addition to the normal ones applicable to all diving situations.

Equipment

Diving from a boat calls for specialized safety measures, and it is imperative that the appropriate equipment is kept onboard at all times. Because boat trips often take divers some distance from shore, a full first-aid kit and emergency-oxygen breathing apparatus are essential. If a diver surfaces with suspected DCS, the swift administration of oxygen could mean the difference between life and death. Similarly, in the event of an emergency, those onboard must be able to call for help, perhaps to arrange for medical assistance on land or to send out a distress call. Depending on your location and situation, a cell phone, satellite phone or VHF radio may be the best option for communication.

Note the location of the safety equipment; if an accident befalls the crew or dive guide, you may be required to use it. Also check the condition of the safety equipment; whether or not it is well maintained is often a good indication of the operator's repute. Gear that is poorly maintained or neglected may not be up to the job in an emergency. Empty oxygen cylinders, unreliable radios or first aid kits that have never been replenished could compound an emergency situation instead of helping to control it. Also be aware of the regulations in your area; for example, all dive boats should display a dive flag, but the recognized standard varies from place to place.

In terms of personal gear, make sure that yours is stowed neatly and securely in a place indicated by the boat's crew. Purchase a dive bag or box to keep your gear tidy; this way you won't have to worry about your belongings becoming a tripping hazard or becoming misplaced. Assemble gear when instructed, and make sure that it's secure at all times while traveling. Although the mechanisms might differ, all dive boats should have tank racks of some kind to help keep cylinders upright and stationary. Unless otherwise directed, weight belts should be stored on the floor to prevent them falling and causing injury to your fellow divers or damage to the deck.

Listen to the captain and crew

Always wait until a crewmember gives you permission to board. If you do not, you could get in the way of pre-departure preparations, like loading gear, warming up the engines or refueling. Follow instructions as to where you may or may not go onboard; dive boats sometimes have off-limits areas. These instructions may vary hugely depending on the situation and type of boat, but they are always issued with your safety in mind. Pay attention to the boat-safety briefing just as you would to a dive briefing. This will include important information like the location of safety equipment, emergency procedures and particular considerations to bear in mind when launching and getting in and out of the water. This information will change depending on the

Boat-Diving Safety Considerations - Cont.



“Let the crew know when you are getting in, and sign back onto the boat upon your return; in this way, you will avoid the nightmare scenario of being left at sea.”



Entries and exits

Because there are usually a lot of divers getting into the water at the same time from a boat, always make sure that your entry is clear. Use the most appropriate deep-water entry for the situation; typically, you will use either a giant stride or a backwards roll. If entering as a group, make sure to synchronize yourselves in order to prevent divers hitting one another with their cylinders. Upon exiting, similar caution is required: keep a constant eye on the boat to ensure that current, waves or wind do not cause a collision, and always allow other divers the space to exit. If waiting your turn to climb a ladder, make sure not to crowd behind the diver ahead of you in case they slip and fall on top of you, cylinder first.

Be aware of both your own boat and others nearby. Always watch and listen for boat traffic while on the surface and during descents and ascents. If you are drift diving, it's a good idea to dive with an SMB or delayed SMB so that boats are continuously aware of your presence. Before entering and exiting the water, make sure that your boat's engines are switched off and that you have the crew's permission to do so. Propeller blades are exceptionally sharp even when they are still, so steer clear of them at all times. Roll call procedures are important, particularly when divers enter the water in buddy pairs rather than under the supervision of a dive guide. Let the crew know when you are getting in, and sign back onto the boat upon your return; in this way, you will avoid the nightmare scenario of being left at sea.

Personal safety considerations

Many of the safety measures associated with boat diving have more to do with the length of time spent at sea and the distance from land, rather than with the boat itself. These measures include staying sufficiently hydrated; boat dives are often full-day trips that add up to a lot of time spent in the sun. Find out when you book your dive whether they'll provide refreshments or if you should bring your own. Similarly, take appropriate precautions against exposure to extreme weather. Wear sunglasses, hats and sunscreen in hot climates; in cooler places, bring wind protection and warm clothing.

Because dive boats are often far from shore, also consider packing equipment spares. Something as simple as a snapped mask strap can force you to forgo a day's diving if you don't have a replacement. If you're prone to seasickness, take medication before you set sail to reduce the likelihood of illness. Seasickness is not only uncomfortable and miserable, but it can also be dangerous, leading to accelerated dehydration.

Spending time on a boat is about much more than convenient transportation; it is an escape back to nature and the beauty of a day spent on the ocean. Make sure that your boat experiences are always positive ones by looking after yourself at sea, and ensuring that you are suitably equipped to deal with an emergency should one arise.

For details: Access web link below

<http://scubadiverlife.com/2014/06/14/boat-diving-safety-considerations/>

Upcoming AUE Activities

- *AUE General Meeting - Saturday 3:00 p.m. - 5:00 p.m. May 21, 2016 - Fulton County/Atlanta Ponce De Leon Library, 980 Ponce De Leon Ave NE, Atlanta, GA 30306. Meeting time is 3:00 p.m. every 3rd Saturday of each month.*
- *Coral Restoration Dives June 1 thru 4, 2016 in Key Largo, FL Contact: DWP- Ken Stewart @ (615) 730-4906*
- *AUE Annual Cookout 2016 Details & date: TBA*
- *West Palm Beach Dive (DiverSe) July 09, 2016 - Contact: Erik Denson @ (407) 497 4447*
- *Coral Restoration Dives July 25 thru 29, 2016 Details: Contact Ken Stewart (615) 730-4906*
- *AUE Panama City Beach Dive Trip and Naval Hard Hat Diving School tour. September 2016 - Details: Dates TBD by Bruce Mitchell trip/tour organizer.*
- *Coral Restoration Dives October 25 thru 8, 2016 Details: Contact Ken Stewart (615) 730-4906*
- *2016 NABS Summit November 5 thru 12, 2016 Renaissance Aruba Resort & Casino Visit NABS website or Facebook page for details. https://www.facebook.com/groups/120032470724/10156328458380725/?notif_t=group_activity*
- *2016 AUE Holiday Party December 2016 Details: TBA*

Recent AUE Activities

- *YMCA Youth Swim Team Scuba Training Elleen Yancey, AUE Originator, Jimi Mack & Alex Colvin, instructors, April 30 & May 1, 2016. Two youth divers & one parent certified SCUBA divers. Much appreciation and thanks to Jimi & Alex for training our youth at their own expense with minimal cost to the parents of these young people.*
- *AUE members (Jon Calloway, Voncile Hodges, Bill Murrain and Chris Searles gave SCUBA diving presentations to students at Southwest High School in Macon, GA. May 5, 2016*
- *Atlanta Underwater Explorers @ Martinis & IMAX at Fernbank Museum of Natural History, May 6, 2016 Several AUE members and two potential new members enjoyed a wonderful evening of food, fun and fellowship.*

- *STEAMsport, Inc. Sea Perch Challenge (Robotics) Competition - AUE members (Elleen Yancey & Alex Adams) provided in water support to youth participants May 7, 2016, Event organizer William Oliver appreciates AUE's support. www.steamsport.com*

Announcements

2016 NABS Youth Educational Summit:

The 13th annual NABSYES Summit will be held June 18th thru 28, 2016. The location is Roatan, Honduras. Contact: Jimi Mack for more information.

Contact: [Jimi Mack mailto:jimimack8@gmail.com](mailto:jimimack8@gmail.com)

[Information and Registration Form
http://www.nabsdivers.org/images/2016NABSYESRegistrationForm.pdf](http://www.nabsdivers.org/images/2016NABSYESRegistrationForm.pdf)



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Editor's Corner

Fellow AUE Members:

Welcome to the May 15, 2016 edition of *AUE Bubbles* newsletter. We hope you find this and future editions informative. Your suggestions, comments and story ideas are welcomed and needed.

An active dive and social calendar is planned for 2016. Stay tuned and find us on the web at www.diveaue.org, on Facebook at <https://www.facebook.com/groups/ATLANTAUNDERWATEREXPLORERS> and via *AUE Bubbles*.

Story ideas are always welcomed. Completed story submissions must be received one week prior to the publishing date (Bi-monthly on the 15th of the month).

The next edition will be published July 15, 2016.

Please submit your story ideas and comments to my attention via email.

Dive safely,
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