

SCUBA DIVING SAFETY BRIEF

LOSSES

Navy and Marine Corps losses involving scuba diving mishaps for FY 91 through 95 include 9 fatalities.

BACKGROUND

A review of scuba diving mishaps shows a variety of factors contribute to the typical mishap. Almost every year two Navy and Marine Corps members lose their lives while open water scuba diving. Recurring causes of deaths and serious injuries are: lack of certification, failure to monitor air supply, exceeding safe diving depths and not observing decompression limits.

EXAMPLES

The following are typical of mishap reports submitted to the Naval Safety Center:

- a. Three shipmates performed a night dive at a depth of 125 feet on a wreck ship. All divers were open water certified with one diver also being certified as a dive master. All divers were outfitted with proper gear. A safety line was deployed and a spare air tank with regulator was suspended on a tending line for a safe ascent. Earthquake hit the island during the dive causing the ship to fill up with silt, lowering visibility to zero making it impossible for the divers to find their way out. They ran out of air and drowned.
- b. Due to strong underwater currents and rough seas, GMGSN and ET3 moved to another dive location. The GMGSN became sea sick during the dive and rested for an hour prior to diving again. They got back into the water and dove to 40 feet. GMGSN swam towards the ET3 and without warning took the ET3's regulator from his mouth and tried to breath. GMGSN bit off the mouthpiece on the

ET3's regulator. ET3 surfaced. GMGSN drowned. Both shipmates were recreational scuba diving certified.

- c. MM2 and friend were scuba diving in rough surf. MM2 was following his buddy 20 yards behind. About 100 yards out from the beach the partner couldn't locate the MM2. His buddy searched on the surface and underwater then returned to shore. MM2 drowned.

RECOMMENDATIONS

Assessing the risks along with making risk decisions and implementing controls to eliminate scuba diving mishaps are as follows:

- a. Prior to certification, get a thorough physical. Inform your doctor you intend to take up scuba diving. After becoming certified, an additional medical check-up is recommended if you are a smoker, overweight, had recent surgery or taking medication.
- b. Obtain certification from one of the following organization: National Association of Underwater Instructors (NAUI), the National Association of Diving Instructor (PADI), National Association of Scuba diving Schools (NASDS), Scuba Schools International (SSI) or the UMCA. Do not attempt cavern, wreck or cave diving with these certifications.
- c. Always dive with a buddy who is certified and have a dive plan.
- d. Check all equipment thoroughly prior to the dive. This includes "O" rings; purge valves, buoyancy compensator, regulator and pressure gauge.
- e. Spend a few minutes before the dive

reviewing hand signals with your partner, the dive plan, conducting a final equipment check and an air sharing drill.

f. Keep a log book for planning additional dives. It provides a record of good dive spots, depths, equipment used and conditions.

g. Keep a close watch on your air supply during each dive.

h. Schedule your deepest dive first. Consult the diving tables for the appropriate schedule. Every dive increases the amount of nitrogen in your body's tissue. Allow time for your body to breathe nitrogen out of your system to prevent decompression sickness – known as the bends. When you make consecutive dives, account for the residual nitrogen still in your body prior to making your next dive.

i. Know the depth of the water and the deepest depth you will reach. Frequently sport divers do not pay close enough attention to the depths they attain. An exact accounting of depth and time is essential to safe diving. The maximum recommended depth for sport divers is 100 feet.

j. Nitrogen under pressure has a toxic effect on the body at depths in excess of 100 feet. If you feel this intoxicating effect or display behavior similar to that of an intoxicated person, you should return to a shallow depth. When your mental alertness is restored, the dive should then be aborted.

k. Make scuba dives on a no decompression schedule. Plan each dive and maximum depth and set time limits prior to the dive. Come up slowly to reduce the chances of experiencing decompression sickness upon ascent. The standard rate for recreational scuba diving is 60-feet per minute.

l. Check with local diving clubs and shops for specific information about diving areas. Profit from the experience of others. Heed their recommendation and warnings.

m. Study weather reports and long range forecasts to determine if conditions are acceptable for diving. Monitor weather conditions continually while diving.

n. Know how to identify the dangerous species of sea life likely to be found in your diving area and how to deal with each. Avoidance is the best policy.

o. To prevent harmful stings and abrasions from contact with sharp rocks, or coral, or urchins wear gloves and protective clothing when diving. Pay attention to where you are in relation to your environment.

p. To prevent an entrapment hazard carry a sharp knife to cut lines. Wire leaders on fishing lines are particularly dangerous. Additionally, sharp projections such as ledges can cut air hoses.

q. If spear fishing, always make sure you enter the water with the spear gun of poseur head unloaded. Defective safeties can victimize you.

r. Take into consideration water temperature and duration of dive. Wear appropriate clothing during the dive.

s. Make sure the surf is manageable. Beware of rough water conditions and strong currents, particularly rip currents

near shoreline. When caught in a rip current, relax and ride along with it until it diminishes enough to swim clear. Another technique is to swim diagonally across it until clear.