

RESCUE SKILLS

Lesson Objectives

This lesson extends rescue skills learned in Ocean Diver training to encompass in-water resuscitation, and the removal of the casualty's equipment to prepare them for recovery from the water. Because rescue skills are the least used, they are also the first to deteriorate. This lesson therefore also includes revision of rescue skills initially learned in Ocean Diver training.

Achievement Targets

At the end of this lesson students will:

- Have revised AS ascents as both donor and recipient
- Have revised the technique to recover an unconscious buddy to the surface using a controlled buoyant lift and to secure them there
- Be competent and confident in their ability to administer in-water rescue breathing
- Be competent and confident in their ability to remove a casualty's equipment, with assistance, to prepare them for recovery from the water

Lesson Contents

1. Briefing

Explain the above objectives. In particular point out the need to keep skills in current practice and how the revision of previously learned rescue skills satisfies this need. Explain how other exercises will build on skills learned previously, both during Ocean Diver training and during the classroom lesson which included resuscitation, to expand their abilities to render assistance in any rescue.

Include all aspects of a 'SEEDS' brief.

Place all equipment where it is accessible from shallow water.

2. Tow including RB - standing depth initially

This exercise builds on the tow learned during Ocean Diver training to incorporate RB. It should commence in chest deep water to enable the grip and procedure to be practiced static while rescuer and casualty are in a realistic position relative to each other. This will allow instructors to closely monitor and, where necessary, correct the grip or technique prior to students practising the technique while towing into deeper water.

To enable concentration on the technique itself, this initial exercise should be performed without the impediment of bulky and heavy SCUBA equipment. Fins will be needed by all students, and it will be useful to have a spare BC available to equip students acting as casualties.

- Towing hold - static

In chest deep water establish hold on casualty's chin with one hand and some suitable grip under casualty's far shoulder with other hand. Arms initially kept straight, keeping casualty in line with the rescuer so that drag of casualty is taken directly along the arm.

Rescuer brings casualty closer to them by bending arms, forearm of hand gripping chin against casualty's shoulder secures a neck extension/keeps mouth closed, casualty's head as close alongside rescuer's head as possible. Return to towing position by straightening arms

- Towing hold - mobile

Repeat above several times while swimming into deeper water and back

- RB sequence - static

Again standing in chest deep water, extend the above exercise to include RB. Starting from straight arm towing position, rescuer brings casualty closer alongside their head, use hand under shoulder to push upwards to roll casualty towards rescuer, rescuer seals mouth over casualty's nose, holds for approx 2 secs. to simulate ventilating the casualty, casualty allowed to roll onto back. Roll/ventilation sequence repeated then casualty returned to straight arm tow position

- RB sequence - mobile

Repeat the sequence of two ventilations of RB approximately every 15 seconds several times while swimming into deeper water (2 - 3m) and back. While rolling/ventilating the casualty, rescuers will find it easier to adopt a more upright posture in the water rather than trying to maintain the tow

Depending upon the build of the student, variations of the technique may be necessary. Where students are experiencing difficulty, instructors should not insist on dogmatic adherence to one particular technique, but assist them to establish a variation which they can effectively perform. The key requirement is effectiveness.

Report dive plan to Dive Manager.

3. Kit up and buddy check

Students should be already competent to assist each other to kit up and carry out their buddy check, but if there has been a significant break in their diving prior to commencing Sports Diver training, instructors should closely monitor their performance for deterioration.

Following the buddy check, carry out a brief dry run review of the AS and controlled buoyant lift exercises. For the AS this should cover:

- recipient taking AS from it's stowage/restraint
- positive grip on each other
- relative positions to enable effective buoyancy control and finning during the ascent

For the CBL this should cover:

- how to maintain a positive grip of the casualty
 - the technique for operating the casualty's buoyancy controls while still being able to operate their own
- Remind students that a buddy check not only ensures that each diver's equipment is correctly fitted

and functioning, but also should be the time when each diver determines how to operate each other's buoyancy controls. At depth, when an incident occurs, is not the time to try to figure this out.

4. Tow including RB - standing depth initially

With the added encumbrance of the SCUBA units, and with the rescuers wearing their masks, the above RB sequences should be repeated and any adjustments made to the technique as a consequence of the additional equipment:

- RB sequence - static
- RB sequence - mobile

At the end of this exercise students should be **competent and confident** in their abilities to tow a casualty and perform RB in the water.

5. AS Ascent revision - deeper water

As in Ocean Diver training, teach for the real situation of the recipient taking the donor's AS from its stowage, not waiting for the donor to remove it and offer it. Again simulate the realistic situation that the recipient will have no gas with which to inflate the BC at the surface.

- AS ascent

Students should act as both donor (initially) and then recipient. Recipient approaches donor signalling 'out-of-air', takes donor's AS from stowage, removes own mouthpiece and replaces with donor's AS, recipient and donor make positive contact with each other by holding shoulder strap or other convenient hand-hold. Once the recipient is breathing from the AS and positive contact is made, donor and recipient ascend at a normal rate to the surface. At the surface, donor fully inflates own BC, supports recipient. Recipient inflates own BC by mouth or emergency cylinder (if fitted) while treading water

Repeat as both donor and recipient

6. Controlled buoyant lift (CBL) - deeper water

These exercises both revise the CBL itself and then add the tow and RB practiced earlier in the lesson. Throughout the sequence, stress the importance of 'less haste more speed'. Proceeding at a rate at which students can clearly think ahead to what the next step is, is far more effective than rushing into doing the wrong thing.

- 'Rescue' CBL

Starting with the casualty and rescuer approx 3m apart, casualty face down on bottom, rescuer swims to casualty, turns casualty onto back, establishes positive hold on casualty (avoid harness quick releases), raises casualty's BC controls above level of shoulder, introduces gas until positive buoyancy achieved, carries out CBL to surface venting in short bursts to control ascent rate, at surface fully inflates casualty's BC

- Tow and RB

Rescuer removes casualty's facemask and mouthpiece, establishes grip on chin and under far shoulder, administers RB for one minute (10 RBs), signals for help, tows casualty for approximately 1 minute, administering two cycles of roll/RB approximately every 15 seconds.

At the end of this exercise the students should be fully **competent and confident** in their abilities to carry out a rescue of another diver. Where this skill is not performed competently or confidently, then further repetitions, with appropriate correction, should be carried out until this standard is achieved.

7. Kit removal - standing depth

While removing a casualty from the water in a swimming pool does not translate very well to real life diving situations, the removal of kit in preparation for removing the casualty from the water does. This exercise therefore is included as a lead into the subsequent open water rescue skills lesson.

Again this lesson should be taught as for the realistic situation of there being other people (but not necessarily divers) around to help. Additional personnel may therefore be required to cover all three roles of casualty, rescuer and helper. Again stress that less haste means more speed.

The benefits of being able to stand while administering RB must be balanced against the fact that, in reality, the rescuer will be tired, and both rescuer and casualty still need their equipment to be urgently removed, in order to subsequently remove the casualty from the water. The use of an assistant helps in some respects, but introduces the additional task of their needing to be managed.

- Kit removal

In waist depth water the rescuer, following one minute RB, calls for assistance and gives instructions on how to remove their own weights/weight belt, fins and SCUBA unit. At this point the rescuer gives the helper instructions as to how to remove the casualty's weights/weight belt, disconnect all waist

and shoulder straps, and dry suit direct feed, if appropriate to the conditions. No rescue breathing takes place during this de-kitting session. At rescuer's command, helper deflates casualty's BC as rescuer takes over supporting the casualty. Helper sinks SCUBA unit below casualty, and water, and pulls clear.

Report back to Dive Manager.

8. Debrief

Using the 'REAP' format, praise good performance and offer constructive criticism where necessary. Reiterate the principles behind the techniques used in the exercises. Explain to students that understanding the principles is important so that, if ever required to perform a rescue in real life, they can adapt the techniques learned to the actual circumstances at the time.

Skill Performance Standards

At the end of this lesson, the students should be sufficiently competent and confident to be able to achieve the following skill performance standards without supervision, in the water conditions experienced:

AS ascent as donor - donor provides clear access to AS for recipient, takes secure hold of recipient and allows recipient to establish a stable breathing rhythm. After exchange of 'OK' signals ascends with recipient, venting own buoyancy device as necessary to control ascent. At surface maintains a secure hold of and supports the recipient, until the recipient's BC is fully inflated.

AS ascent as recipient - recipient removes donor's AS from stowage, clears it of water and commences to breathe from it, takes secure hold of donor, when breathing rhythm stabilised exchanges 'OK' signal with donor and then signals 'up'. Student ascends with donor, venting own buoyancy device as necessary to control ascent. At surface student inflates BC fully orally or by emergency cylinder (if fitted).

Rescue sequence - student achieves a secure hold of the casualty, inflates the casualty's buoyancy device to produce adequate positive buoyancy to lift the casualty, manages the casualty's and own buoyancy to achieve a controlled ascent to the surface, fully inflates the casualty's buoyancy device at the surface, clears casualty's mouthpiece/mask from face, give RB for 1 min i.e. 10 RBs., signals for help, tows casualty 25m maintaining control of direction. Administering two effective breaths of RB approximately every 15 seconds during tow. Gives clear instructions to assistant regarding removal of own and casualty's equipment whilst in standing depth.