

# TecRec, Rebreather/TecCCR, and Public Safety Diving Skill Conduct Recommendations during COVID-19

## General:

For interactions, skills, other drills or practice that may take place on the surface or on land, please follow existing conduct recommendations found within the [PADI Training News](#) and [DAN COVID-19 Resource](#) pages, as well as all applicable local and governmental mandates. Refer to guidance on proper social distancing and personal protection considerations, like those found within [PADI Best Practices to Reduce Transmission Risk](#). Please be sure to limit the number of people and/or the size of your team, where possible and where required. The main transmission risk issues with COVID-19 (and other respiratory viruses like the flu) are respiration (inhaling droplets from another person's exhalation, especially if the person coughs, sneezes or talks) and transmission through contact (touching an infected surface and then contacting the face/nose). By staying aware, risk reduction is usually straightforward. Keeping things simple usually works well. This document suggests practices, procedures, and tips based on prevailing medical recommendations, but there may be other ways to reduce transmission risk. **While such steps are expected to substantially reduce disease transmission risk, dive students, instructors and staff must accept that, just as when they go *anywhere* that people are present, some risk remains.**

## Gear Disinfection:

PADI, DAN and the dive community recommend that all gear that will be used on a dive be appropriately disinfected prior to and after its use. This applies to all required and supplemental equipment. Please refer to suggested gear disinfection guidelines, such as [DAN Disinfection of Scuba Equipment and COVID-19](#). **In particular, Masks, Regulators, SMB's, Liftbags, and BCDs should be rinsed immediately after the dive in fresh water and then disinfected as appropriate.**

**Use extra caution when cleaning and disinfecting rebreathers, and disposing of any fluids that may have collected within the loop and counter lungs. Avoid flushing/clearing the counter lungs at the boat/surface. Any used scrubber media (sorb) should also be discarded prudently. During rebreather setup, ensure that appropriate social distancing and personal protection protocols are being followed to reduce COVID transmission risks. Follow all rebreather manufacturer disinfection guidelines.**

## The Following Skills Require Modified Conduct and Increased Caution:

- Gear assembly and donning
- Pre-dive safety checks
- Safety drills (S-Drills)
- Gas loss and gas sharing emergencies
  - includes NOTOX - breathing wrong gas
- Stage/deco/bailout cylinder exchanges
- No-mask swims
- Surfacing an unresponsive diver
- Unresponsive diver at the surface/Providing aid at surface
  - includes gear removal and rescue breathing on the surface
- Other Rescue Related Skills
- Additional simulated “spontaneous emergencies” assigned at the instructor's discretion

## Skill and Scenario Conduct Recommendations:

- **Gear assembly and donning**
- **Pre-dive safety checks**
- **Safety drills (S-Drills)**
- **Entry and exit**

For these skills, maintain adequate social distance on land and at the surface (as applicable) until the team descends underwater. It is recommended that all divers keep masks on and breathe from regulators/the loop wherever possible prior to descending and after surfacing, especially if close or intervention is required for assistance or to facilitate skill completion. However, teams and staff should be extra vigilant when using hypoxic gases as a precaution against wrong-gas use.

## Gas Loss and Gas Sharing Emergencies

To limit the potential for disease transmission, do not share second stages between divers. All second stages must also be properly disinfected before use in gas sharing exercises.

Instructors must verify that all divers have appropriate breakaway connections/clips (break easily under applied tension so they release easily in a true emergency without being cut away, unclipped or unfastened) installed on their long hose (primary) regulators. This is particularly important for any out of gas (OOG) skills that will be conducted during an ascent or while conducting real or simulated decompression.

Both the OOG diver and the donor should start these skills breathing from their long hose (primary) regulator. When training involves hypoxic gases, carefully choose gases used for sharing skills that can be breathed at the depth at which the skills will take place.

At all times, the instructor must maintain skill realism, practicality and diver safety.

### Method 1 (simulated exchange)

1. The OOG diver signals "out of gas" to the donor.
2. The donor gives their primary long hose regulator to the OOG diver, and deploys the full length as they normally would. However, the OOA diver *does not* breathe from donated second stage. Instead, the OOG diver test purges the donated second stage, followed by clipping it to a chest D-Ring.
3. The donor switches to their backup regulator as they would normally.
4. The OOG diver switches *to their backup regulator*.
5. All diver touch contact, positioning and communication procedures remain unchanged per the original intent of the skill and as planned or appropriate for gear configurations.
6. The instructor may also choose to carry an additional dedicated cylinder with bottom-breathable mix and a long hose to use in case of a real (not simulated) emergency. A smaller cylinder (like a 6L/40cf) will usually suffice to meet this requirement during most training dives, however gas requirements should still be calculated to confirm it would be enough to abort the dive.

### Method 2 (off board)

This method requires that both the instructor and the student carry an additional dedicated cylinder with bottom mix and a long hose with disinfected second stage. The instructor (or another student) takes part in the exercise with the OOG student and donates this regulator instead of the one from their mouth. A smaller cylinder (like a 6L/40cf) usually will suffice to meet this requirement during most training dives, but gas requirements should still be calculated to confirm this. There should be no sharing of second stages between divers, so the regulator must either be disinfected between divers or the instructor may choose to carry up to two of these small dedicated air sharing cylinders during training dives. Student divers may only carry a maximum of one of these cylinders.

1. The OOG diver signals "out-of-gas" to their partner.
2. The diver/instructor donates the dedicated off board long hose second stage to the OOG diver, and deploys the full length of the long hose as if it were the one from their mouth. The OOG diver breathes from the donated regulator.
3. The remainder of the skill should be conducted as normal and as indicated within the Instructor Guide.
4. All diver touch contact, positioning and communication procedures should remain unchanged per the original intent of the skill.

### Method 3 (instructor carries off board)

Alternatively, instructors may carry a dedicated off board cylinder (as indicated above in Method 2 regarding size, content and gas planning), with two or more disinfected long hose second stages that can be independently be donated to separate students. If this option is chosen, student divers may not need to carry an additional cylinder, as indicated in Method 2. This helps reduce potential task loading. The instructor takes part in the exercise with each of the students during OOG simulations and donates this regulator instead of the one from the mouth. Caution should be taken to differentiate each of the long hose second stages (color, tag or other marking) so that students do not accidentally breathe from the same regulator. It's obviously important to minimize entanglement risk, and regulators should be comfortably and quickly deployed (and stowed) and not interfere with access to other gear items or vents.

1. The OOG diver signals "out-of-gas" to their instructor.
2. The Instructor donates the dedicated off board long hose second stage to the OOG diver, and deploys the full length of the long hose as if it were the one from the mouth. The OOG diver breathes from the donated regulator.
3. The remainder of the skill should be conducted as normal and as indicated within the Instructor Guide.
4. All diver touch contact, positioning and communication procedures should remain unchanged per the original intent of the skill.

For any of the three methods listed above, it is the instructor's choice to pick the most suitable option for the course they are conducting while considering student comfort and skill level. At all times, the instructor must maintain skill realism, practicality and diver safety.

### Stage/Deco/Bailout Cylinder Swapping

Divers should not share the same second stage. If a stage, deco or bailout cylinder would have normally been breathed from by a different team member, follow the gas sharing guidance above.

For skills such as those found within the Tec CCR course range in which divers may bail out to the BOV or their off board system and then switch to a team mate's off board system, Method 2 above works well.

### No Mask Swims

Masks and backup masks may not be shared between divers.

### Unresponsive Diver at the Surface/Providing Aid at Surface (gear removal/rescue breathing)

Wash/sanitize hands and divers should avoid touching their face before and after each drill. The easiest option, however, is to pair non-isolated buddies to reduce the need to do this.

Use rescue breathing masks (valve may be used if it can be kept dry), each specific to one student only. All divers must be very aware of exhalation directions. Rescuers do not make lip contact with the rescue breathing mask and after demonstrating they could blow into the mask, turn their head and exhale away from the victim.

For mouth-to-mouth practice, options include:

- Use a rescue breathing mask on the victim, but use mouth-to-mouth techniques (i.e. pinching nose over rescue breathing mask) and follow the procedures as mentioned in the rescue breathing mask technique.
- Use face shields that are commonly used with CPR mannequins during the exercise to avoid skin-to-skin contact. Rescuers do not make mouth contact and exhale away from the victim.
- Simulate removing the victim's mask but leave it in place. This avoids the rescuer from having to touch the victim's nose directly. Again, rescuers and victim avoid breathing toward each other.

### Other Rescue Related Skills (such as those found within the Public Safety Diver course range)

- **Scenarios**
- **First Aid and CPR Administration**
- **Oxygen Administration**

Social distancing becomes more difficult as the scenario becomes more realistic, so advise students to pay attention and conservatively apply steps that reduce transmission risk. Allow "time outs" to put on medical masks, sanitize hands, etc. as needed. Emphasize that more distancing than would be used in a real emergency is acceptable. Having CPR mannequins or other specialized mannequins take the place of humans during a rescue scenario is a useful option.

During CPR, first aid, and emergency oxygen training, avoiding contact and maintaining social distancing may be more difficult. Participants can reduce risk by wearing medical masks and using barriers, sanitizing/washing hands often and remaining aware. Disinfection wipes are useful for disinfecting oxygen masks and other contact surfaces (again, following manufacturer instructions). Disinfect everything after classes prior to storage.

**Note: Recommended hand sanitizers are 60%+ alcohol and highly flammable. Do not use hand sanitizer near oxygen nor a fire source. Be sure hands are fully dried before using either.**

For lay single-person CPR training, provide each student with an individual mannequin that will be fully disinfected (including replacing the lungs) according to manufacturer recommendations before use by a

different person, and after training. Assure medical mask use and social distancing between students. CPR mannequins typically require disinfecting the head and chest and discarding the lung bag.

Follow these links for specific mannequin hygiene resources:

- [United Kingdom](#)
- [American Heart Association](#)
- [Australian Resuscitation Council/New Zealand Resuscitation Council](#)