

## Rescue and CPR Guidance

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These notes are intended to provide a framework for a return to diving following easing of government restrictions as a result of the COVID-19 pandemic. This guidance is based on current knowledge and understanding of the risks associated with the outbreak and the current scientific evidence informing decisions by government and other relevant authorities. It is acknowledged that the evidence base and knowledge surrounding the outbreak is rapidly and continually evolving and so the guidance will be reviewed regularly and be subject to update and amendment as appropriate.

### **STATUS**

Currently in the UK different criteria applies within each of the devolved administrations. Please refer to the [STATUS document](#).

### **Protecting others and reducing the demands on the NHS**

Current advice on avoiding transmission of the virus can be found on the Government Website. <https://www.gov.uk/government/collections/coronavirus-covid-19-list-of-guidance>

**The advice for anyone in any setting is to follow these main guidelines:**

- The most common symptoms of coronavirus (COVID-19) are recent onset of a new continuous cough and/or high temperature. If you have these symptoms, however mild, stay at home and do not leave your house for 7 days from when your symptoms started (if you live alone), or 14 days (if you live with someone who has symptoms). You do not need to call NHS 111 to go into self-isolation. If your symptoms worsen during home isolation or are no better after 7 days, contact [NHS 111 online](#). If you have no internet access, you should call NHS 111. For a medical emergency dial 999.
- Wash your hands more often than usual, for 20 seconds using soap and hot water, particularly after coughing, sneezing and blowing your nose, or after being in public areas where other people are doing so. Use hand sanitiser if that's all you have access to.
- To reduce the spread of germs when you cough or sneeze, cover your mouth and nose with a tissue, or your sleeve (not your hands) if you don't have a tissue, and throw the tissue in a bin immediately. Then wash your hands or use a hand sanitising gel.
- Clean and disinfect regularly touched objects and surfaces using your regular cleaning products to reduce the risk of passing the infection on to other people.

**Anyone displaying any symptoms should NOT engage in any activity outside the home.**

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### **Rescue**

We should all be familiar with the well established principle of getting the casualty safely to the surface, with minimal risk to the rescuer. Now have to consider risk to rescuer from viral infection.

### **Basic Life Support (BLS)**

BSAC Sports Diver training includes skills of adult Basic Life Support (BLS) and the application of Cardiopulmonary Resuscitation (CPR) in circumstances where a casualty is unresponsive and not breathing normally.

## **Cardiopulmonary Resuscitation (CPR)**

The UK Resuscitation Council (UKRC) has produced a series of guidance on resuscitation practice during period of the pandemic taking account of the risk of infection to both the casualty and the rescuer.

On land the most likely cause of a need for CPR is heart attack and for untrained rescuers the advice is to call for assistance and then provide chest compression only CPR. This technique is particularly effective where emergency medical services and advanced life support can take over within 10 minutes of the event occurring.

There are circumstances where chest compression only CPR may be ineffective and these include drowning casualties. In this situation, where respiratory arrest has occurred but the heart continues to circulate the blood, the oxygen in the blood is consumed by metabolism. In such circumstances it is important to re-oxygenate with ventilation or rescue breaths. Early rescue breaths will ensure that the heart continues to operate and breathing restarts.

The UK Government has published the following advice for first responders:

<https://www.gov.uk/government/publications/novel-coronavirus-2019-ncov-interim-guidance-for-first-responders/interim-guidance-for-first-responders-and-others-in-close-contact-with-symptomatic-people-with-potential-2019-ncov>

In the context of scuba diving:

“1. This guidance is for first responders . . . and others who may have close contact with individuals with potential coronavirus infection (COVID-19). This includes professionals and members of voluntary organisations who, as part of their normal roles, provide immediate assistance requiring close contact until further medical assistance arrives.”

The guidance includes:

“7.2 If you are required to perform cardiopulmonary resuscitation (CPR), you should conduct a risk assessment . . . and adopt appropriate precautions for infection control. In adults, it is recommended that you do not perform rescue breaths or mouth-to-mouth ventilation; perform chest compressions only. Compression-only CPR may be as effective as combined ventilation and compression in the first few minutes after non-asphyxial arrest (cardiac arrest not due to lack of oxygen).

Cardiac arrest in children is more likely to be caused by a respiratory problem (asphyxial arrest), therefore chest compressions alone are unlikely to be effective.

If a decision is made to perform mouth-to-mouth ventilation in asphyxial arrest, use a resuscitation face shield where available.

Should you have given mouth-to-mouth ventilation there are no additional actions to be taken other than to monitor yourself for symptoms of possible COVID-19 over the following 14 days. Should you develop such symptoms you should follow the advice on what to do on the NHS website.”

The guidance for asphyxia arrest would also correspond to that necessary for intervention in a drowning incident in diving and other conditions such as IPO.

## **Reducing the need for in-water rescue breaths**

As a working diver normal practice is not to give rescue breaths (RB) until the casualty has been removed from the water to a safe platform (boat, shore etc). In these workplace situations, the diver will often be in direct contact with the surface (lifeline or umbilical) or be closely tracked by a boat. First aid trained personnel will often be competent in the use of bag valve mask. During the pandemic, our risk assessment might include reducing distances that the diver operates from the

shore, providing rescue support to get casualties back to the shore more quickly. When boat diving, reducing the number of pairs in the water will allow them to be tracked more closely and so responded to more quickly.

Where the decision has been made not to give in-water rescue breaths, it is important that the casualty's airway is opened and protected from the water on initial contact.

### **Risk Assessment**

The decision on whether or not to provide Rescue Breaths (RB) during a rescue should be the subject of a specific Risk Assessment. This would take into account:

- proximity to the shore, boat or a hard platform on which CPR can be administered,
- the availability of an alternative to RB for ventilating the casualty, eg bag valve mask,
- the availability of a defibrillator
- the likely response time of the emergency services or advanced care

**Note:** in a diving context any potential casualty will normally have been fit to dive and be known to either their buddy and other members of a dive trip. None-the-less at the current time it is not always possible to know whether a person is carrying the coronavirus and therefore presents a risk of infection.

Situations where CPR is required in a diving environment in the UK are rare but do occur averaging no more than 20 per year. BSAC Incident report analysis in 2018 demonstrated the efficacy of rescue efforts including in-water rescue breaths, CPR, Oxygen enriched RB and AED use. [www.bsac.com/incidentreport](http://www.bsac.com/incidentreport)

Any member of a dive party trained in the delivery of CPR should consider their own Risk Assessment should they be called upon to assist another diver requiring CPR including:

- Personal attitude to risk of infection versus saving a life?
- Available PPE
- Assessment of likelihood to require RB inclusive CPR
- Assessment of response times for emergency services
- Availability of AED (what happens if voice prompts indicate give RB?)

### **Emergency equipment**

Emergency equipment such as oxygen sets, AED and First Aid kits should be checked for function as normal. Checks on mouthpieces, oro-nasal masks and pocket masks should avoid breathing from them to minimise the risk of contamination. After checking all surfaces touched should be disinfected using appropriate wipes and allowed to dry fully before packing away. If not already included rescue equipment should be supplemented with protective equipment:

- Face shields or other barriers for protection of casualty and rescuers
- Gloves
- Antiseptic wipes
- Alcohol based hand sanitiser

### **Bag Valve Mask**

For those who are trained and practised in the use of a bag valve mask (BVM) or bag and mask, this provides an effective means of ventilation of the casualty with reduced risk to the operator by avoiding the direct face-to-face contact of rescue breaths (RB). The BVM also allows the delivery of a high percentage of supplemental oxygen when used in conjunction with an oxygen set. However, it is important for the rescuer to wear PPE such as a mask or face-covering, eye protection and gloves. The rescuer should be trained in the use of this PPE to ensure effective protection.

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To be used in conjunction with other guidance including:

- Medical guidance
- STATUS
- Equipment guidance
- Shore diving
- Diver Training
- Travel Guidance
- Charter boat diving
- RIB diving
- Swimming pool usage
- Etc.