

COVID-19 AND DIVING

CAN THE VIRUS SURVIVE IN WATER?



Research is still ongoing, and it is not clear how long the SARS-CoV-2 virus can survive in water. Studies on the SARS-CoV-1 virus (2003 epidemic) have shown that it remained infectious for long periods on the surface (lakes, rivers, wetlands, etc.). It appears that sea water is not able to neutralise the virus. In properly chlorinated or bromated pools and hot tubs, the CDC (Center for Disease Control) specifies that SARS-CoV-2 would be inactivated after a period of time (3).

According to current evidence, it is therefore recommended that care is taken both when in the water and out of the water. This includes respecting distancing rules and properly washing and disinfecting equipment.

HOW CAN BUDDY CHECKS AND GAS SHARING BE MANAGED SAFELY?



Distancing rules should be respected also in relation to the following operations:

- Buddy Checks: divers should be reminded to avoid touching other divers' equipment, especially those parts that come into close contact with the diver's face and mouth. A visual buddy check should be carried out, with self-demonstration and verbal confirmation.
- Gas sharing: both in case of emergency and when performing drills, it is recommended to use an alternative gas source and avoid donating the regulator from which the diver is breathing.

PLEASE NOTE

Guidelines provided by dive training agencies on these subjects may vary. Make sure you know and respect the latest guidelines issued by your training agency.



ACKNOWLEDGEMENTS

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WE FOLLOW THESE GUIDELINES

INFECTION CONTROL OF RENTAL EQUIPMENT



- ✓ Rental equipment should be disinfected as indicated, after each use, paying particular attention to regulators, BCDs, snorkels and masks.
- ✓ Rental masks need to be fit-tested by each diver before use, which implies disinfection after each test. Customers may be encouraged to bring at least their own mask.
- ✓ Keep areas for returned rental equipment separate from areas where disinfected equipment is stored.
- ✓ Customers should be prevented from entering the area where disinfected equipment is stored. Bring the gear out to customers.
- ✓ Transport rental equipment in individual containers, marked with customer's name, and remember to disinfect these after use.
- ✓ Once disinfected, handle the equipment safely, e.g. by storing masks, regulators and snorkels in closed bags, to be removed before use.
- ✓ Instruct customers not to touch the cylinder valve outlet or regulator inlet when assembling and disassembling their scuba unit.

SODIUM HYPOCHLORITE

Common **bleach**, marketed under different brands and with variable percentages (5-10%) of its active ingredient, **sodium hypochlorite**, is among the products able to neutralise the virus. It is important to read the product label carefully, check the percentage of active ingredient, and dilute it in water in the right measure. Recent scientific studies (1) suggest a **1:50** dilution of bleach containing **5%** of sodium hypochlorite (concentration of **0.1%** or **1,000 ppm** of active ingredient), with complete immersion of the objects for at least **5 minutes**.

Here's a practical example of how to dilute the product in water, to obtain **5 litres** of solution containing **0.1%** of active ingredient:

- ✓ 5% sodium hypochlorite bleach // 100 ml of product in 4900 ml of water, or
- ✓ 10% sodium hypochlorite bleach // 50 ml of product in 4950 ml of water

DISINFECTION OPERATIONS



Studies of other coronaviruses have shown their infectivity can be reduced by heat, UV light and alkaline or acidic conditions. Because of this, surfaces can be disinfected using household cleaning products.

INTRODUCTION

There are still no specific tests carried out regarding the survival of SARS-CoV-2 virus on diving equipment especially where it has penetration cavities or threaded sections. It is therefore imperative that diving equipment is disinfected after use in order to neutralise the virus. Some products, such as quaternary ammonium compounds, are effective and highly compatible with typical diving equipment materials (rubber, neoprene, plastics, metal, etc.), however difficult to source or harmful for the marine environment. Other products, such as bleach (sodium hypochlorite), are easier to find and cheaper, but must be used in accordance with the guidelines for COVID-19. There are also other products (EW80, Virkon S etc.), commonly used by divers, that have been proven to be effective against the virus.

In the United States, the EPA (Environmental Protection Agency) provides a [list](#) of disinfectants effective against the SARS-CoV-2 virus. In Europe, the ECDC (European Centre for Disease Prevention and Control) has published some [guidelines](#).

Regardless of the active ingredients chosen or the method of disinfection, it is of the utmost importance that its effectiveness against the new coronavirus is proven.

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