



# LifeWaters:

## Adaptive Diver and Dive Trip Application

New diver or snorkeler

Volunteer:  Dive Buddy  Other: \_\_\_\_\_

Trip application: \_\_\_\_\_

How were you referred to Lifewaters? \_\_\_\_\_

Are you a certified diver?  Yes  No If yes, certification number: \_\_\_\_\_

what is your highest diver certification level? \_\_\_\_\_

If yes, which agency?  SDI  PADI  SSI  NAUI  NASDS  FMAS  CMAS  Other: \_\_\_\_\_

Dive experience:  New Diver  <25 dives  <50 dives  <100 dives  >100 dives  total number of dives: \_\_\_\_\_

**Personal Information:**

Name: \_\_\_\_\_ DOB: \_\_\_\_\_ age \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_

State: \_\_\_\_\_ zip: \_\_\_\_\_

Primary phone: \_\_\_\_\_  Cell  Home  Work

Secondary phone: \_\_\_\_\_  Cell  Home  Work

Email address: \_\_\_\_\_

Have you ever been in the service?  Yes  No

If so, which branch:  Air Force  Army  Marines  Navy  Coast Guard

Service status:  Active  Med Board  discharged/retired

Gender:  Male  female height: \_\_\_\_\_ weight: \_\_\_\_\_

Shirt size:  Small  Medium  Large  Large  XX-Large  Other: \_\_\_\_\_

Have you participated in trips for injured military?  Yes  No If yes, how many? \_\_\_\_\_

What organization(s) sponsored the trip? \_\_\_\_\_

Do you have a passport?  Yes  No

Do you consider yourself able to travel?  independently  with assistance

Do you consider yourself financially able to participate in a dive trip at least once a year?

Within the USA?  Yes  No

Outside of the country?  Yes  No

**Emergency contact information:**

Emergency contact's name: \_\_\_\_\_ phone: \_\_\_\_\_

Relationship: \_\_\_\_\_ Will they be traveling with you?  Yes  No

Your primary physician's name: \_\_\_\_\_ phone: \_\_\_\_\_

Medical Insurance Provider: \_\_\_\_\_

**Medical History**

<input type="checkbox"/> High blood pressure	<input type="checkbox"/> Low blood pressure	<input type="checkbox"/> Autonomic dysreflexia	<input type="checkbox"/> Heart problems
<input type="checkbox"/> Lung disease	<input type="checkbox"/> Asthma	<input type="checkbox"/> Diabetes	<input type="checkbox"/> Liver problems
<input type="checkbox"/> seizures	<input type="checkbox"/> other: _____	<input type="checkbox"/> Allergies:	
Injury/disability:	<input type="checkbox"/> TBI	<input type="checkbox"/> Spinal Cord Injury	<input type="checkbox"/> Burns
<input type="checkbox"/> amputation	<input type="checkbox"/> Disfigurement	<input type="checkbox"/> Visual Impairments: list:	<input type="checkbox"/> other: _____
date of Injury: _____	Location (country) of Injury:	Recent revisions/surgeries:	Please describe the nature of your injury and how it affects you:
Medications: name, dose, frequency			

Medications cont.			
Assistive device(s):	Prosthetic use: <input type="checkbox"/> yes <input type="checkbox"/> no Which activities:	Service animal: Breed: _____ Name: _____	Dietary restrictions: describe:
Are there any reasons to limit your participation in physical activity? <input type="checkbox"/> yes <input type="checkbox"/> no Describe if yes:	Do you have any skin breaks/open wounds at this time? <input type="checkbox"/> yes <input type="checkbox"/> no History of sores? <input type="checkbox"/> yes <input type="checkbox"/> no  If yes, where?	What else would you like us to know?	

### **HIPAA AUTHORIZATION FOR USE OR DISCLOSURE OF HEALTH INFORMATION**

This provision authorizing the disclosure of my medical information is intended to comply with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy Standards. I hereby authorize Life Waters to use or disclose all my health and medical information provided herein to the Life Waters Board of Directors, Officers, Agents, Life Waters Dive Buddies and Dive Masters, and other personnel and volunteers participating in the Life Waters activity for which I am applying to become a participant. The purpose of this authorization is to authorize the recipients identified above to use such information for all purposes associated with my participation in the Life Waters activity, including but not limited to preparing for and assisting me in my participation in such activity. This authorization will end upon completion of my participation in the Life Waters activity. I understand that I have the right to revoke this authorization, in writing, at any time, except where uses or disclosures have already been made based upon my original permission. To revoke this authorization, I must do so in writing and send it to an officer or director of Life Waters. I understand that uses and disclosures already made based upon my original permission cannot be taken back. I understand that it is possible that information used or disclosed with my permission may be re-disclosed by the recipient and is no longer protected by the HIPAA Privacy Standards. I will receive a copy of this authorization after I have signed it. A copy of this authorization is as valid as the original.

### **Release and indemnity**

I hereby release and discharge LifeWaters, and all affiliated and associated organizations, together with their respective trustees, directors, officers, employees, and agents, of and from any and all demands, claims, causes of action, suits, damages, judgments, or liabilities of any kind or nature whatsoever, arising out of or in any way related to the Participant's participation in a LifeWaters activity, including any personal injury or death or loss or damage to property, which the Participant may suffer or incur as a result of participating in such program, whether or not caused by the negligence or wrongful acts of such persons or any agents, servants, or administrators of the Participant. I do further agree to indemnify and hold harmless each of them, of and from any and all claims, demands or actions of any kind or nature whatsoever arising out of any injury or damages incurred by the Participant. In signing this release, I acknowledge and represent that I am over 19 years of age. I am of sound mind, I have read this release, understand it, and sign it voluntarily, and that this paper contains the entire agreement between myself and LifeWaters.

### **Audio/visual consent**

I hereby consent and authorize the taking of photographs, movies, films, videotapes, tape recordings, or reproductions (collectively, "Reproductions") of the persons who are hereby applying for membership and consent to use, copyright, license, publication or broadcast of the same for advertising, educational, promotional, or publicity purposes on the part of LifeWaters and by its affiliated and associated organizations, including its directors, officers, agents, servants and employees. I hereby grant and assign to LifeWaters the right, title and irrevocable authority and interest to such Reproductions. I waive any and all claims for compensation and waive any and all related to or arising out of the publication and dissemination of the same of any lawful purposes. I further authorize the communication of information concerning the undersigned in connection with the utilization of such Reproductions by LifeWaters, and its affiliated or associated organizations, and their respective directors, trustees, officers, agents, servants and employees without claim for compensation and waive all claims related to or arising out of the publication and dissemination of the same.

### **Consent for Emergency treatment**

In the event that a Participant should sustain any injuries while participating in a LifeWaters activity or while on the premises of LifeWaters, the Participant may be examined and treated by health care personnel, including examination and treatment at medical facilities. I voluntarily consent to such examination and treatment for the Participant, and I release and forever discharge LifeWaters, its directors, officers, staff, employees, contracted employees, agents and volunteers from any actions, suits, damages, claims, or judgments that may result from examination and treatment.

\_\_\_\_\_ I agree to the above HIPAA Authorization, Assumption of Risk, Photo Consent and Release and Authorization of Medical Treatment.

Your Initials

\_\_\_\_\_  
Signature/Printed Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness Signature/Printed Name

\_\_\_\_\_  
Date

Thank you for your interest in LifeWaters.

After completing this form in its entirety, please email it to [jcampbell@lifewaters.org](mailto:jcampbell@lifewaters.org) or mail to 515 S Miller St., Lakewood, CO 80226

Upon receipt you will receive a call to review the information you provided to ensure you meet LifeWaters Membership qualifications.

To learn more please visit [www.lifewaters.org](http://www.lifewaters.org)



**UNDERSEA &  
HYPERBARIC  
MEDICAL  
SOCIETY**

## Diver Medical | Participant Questionnaire

Recreational scuba diving and freediving requires good physical and mental health. There are a few medical conditions which can be hazardous while diving, listed below. Those who have, or are predisposed to, any of these conditions, should be evaluated by a physician. This Diver Medical Participant Questionnaire provides a basis to determine if you should seek out that evaluation. If you have any concerns about your diving fitness not represented on this form, consult with your physician before diving. If you are feeling ill, avoid diving. If you think you may have a contagious disease, protect yourself and others by not participating in dive training and/or dive activities. References to "diving" on this form encompass both recreational scuba diving and freediving. This form is principally designed as an initial medical screen for new divers, but is also appropriate for divers taking continuing education. For your safety, and that of others who may dive with you, answer all questions honestly.

### Directions

**Complete this questionnaire as a prerequisite to a recreational scuba diving or freediving course.**

**Note to women:** If you are pregnant, or attempting to become pregnant, *do not dive*.

1	I have had problems with my lungs, breathing, heart and/or blood affecting my normal physical or mental performance.	Yes <input type="checkbox"/> Go to box <b>A</b>	No <input type="checkbox"/>
2	I am over 45 years of age.	Yes <input type="checkbox"/> Go to box <b>B</b>	No <input type="checkbox"/>
3	I struggle to perform moderate exercise (for example, walk 1.6 kilometer/one mile in 14 minutes or swim 200 meters/yards without resting), OR I have been unable to participate in a normal physical activity due to fitness or health reasons within the past 12 months.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
4	I have had problems with my eyes, ears, or nasal passages/sinuses.	Yes <input type="checkbox"/> Go to box <b>C</b>	No <input type="checkbox"/>
5	I have had surgery within the last 12 months, OR I have ongoing problems related to past surgery.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
6	I have lost consciousness, had migraine headaches, seizures, stroke, significant head injury, or suffer from persistent neurologic injury or disease.	Yes <input type="checkbox"/> Go to box <b>D</b>	No <input type="checkbox"/>
7	I am currently undergoing treatment (or have required treatment within the last five years) for psychological problems, personality disorder, panic attacks, or an addiction to drugs or alcohol; or, I have been diagnosed with a learning or developmental disability.	Yes <input type="checkbox"/> Go to box <b>E</b>	No <input type="checkbox"/>
8	I have had back problems, hernia, ulcers, or diabetes.	Yes <input type="checkbox"/> Go to box <b>F</b>	No <input type="checkbox"/>
9	I have had stomach or intestine problems, including recent diarrhea.	Yes <input type="checkbox"/> Go to box <b>G</b>	No <input type="checkbox"/>
10	I am taking prescription medications (with the exception of birth control or or anti-malarial drugs other than mefloquine (Lariam).	Yes <input type="checkbox"/> *	No <input type="checkbox"/>

### Participant Signature

**If you answered NO** to all 10 questions above, a medical evaluation is not required. Please read and agree to the participant statement below by signing and dating it.

**Participant Statement:** I have answered all questions honestly, and understand that I accept responsibility for any consequences resulting from any questions I may have answered inaccurately or for my failure to disclose any existing or past health conditions.

\_\_\_\_\_  
Participant Signature (or, if a minor, participant's parent/guardian signature required.)

\_\_\_\_\_  
Date (dd/mm/yyyy)

\_\_\_\_\_  
Participant Name (Print)

\_\_\_\_\_  
Birthdate (dd/mm/yyyy)

\_\_\_\_\_  
Instructor Name (Print)

\_\_\_\_\_  
Facility Name (Print)

\* **If you answered YES** to questions 3, 5 or 10 above **OR** to any of the questions on page 2, please read and agree to the statement above by signing and dating it **AND take all three pages of this form (Participant Questionnaire and the Physician's Evaluation Form) to your physician** for a medical evaluation. Participation in a diving course requires your physician's approval.

## Diver Medical | Participant Questionnaire Continued

<b>BOX A – I HAVE/HAVE HAD:</b>		
Chest surgery, heart surgery, heart valve surgery, an implantable medical device (eg, stent, pacemaker, neurostimulator), pneumothorax, and/or chronic lung disease.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Asthma, wheezing, severe allergies, hay fever or congested airways within the last 12 months that limits my physical activity/exercise.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
A problem or illness involving my heart such as: angina, chest pain on exertion, heart failure, immersion pulmonary edema, heart attack or stroke, OR am taking medication for any heart condition.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Recurrent bronchitis and currently coughing within the past 12 months, OR have been diagnosed with emphysema.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Symptoms affecting my lungs, breathing, heart and/or blood in the last 30 days that impair my physical or mental performance.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
<b>BOX B – I AM OVER 45 YEARS OF AGE AND:</b>		
I currently smoke or inhale nicotine by other means.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
I have a high cholesterol level.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
I have high blood pressure.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
I have had a close blood relative die suddenly or of cardiac disease or stroke before the age of 50, OR have a family history of heart disease before age 50 (including abnormal heart rhythms, coronary artery disease or cardiomyopathy).	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
<b>BOX C – I HAVE/HAVE HAD:</b>		
Sinus surgery within the last 6 months.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Ear disease or ear surgery, hearing loss, or problems with balance.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Recurrent sinusitis within the past 12 months.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Eye surgery within the past 3 months.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
<b>BOX D – I HAVE/HAVE HAD:</b>		
Head injury with loss of consciousness within the past 5 years.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Persistent neurologic injury or disease.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Recurring migraine headaches within the past 12 months, or take medications to prevent them.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Blackouts or fainting (full/partial loss of consciousness) within the last 5 years.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Epilepsy, seizures, or convulsions, OR take medications to prevent them.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
<b>BOX E – I HAVE/HAVE HAD:</b>		
Behavioral health, mental or psychological problems requiring medical/psychiatric treatment.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Major depression, suicidal ideation, panic attacks, uncontrolled bipolar disorder requiring medication/psychiatric treatment.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Been diagnosed with a mental health condition or a learning/developmental disorder that requires ongoing care or special accommodation.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
An addiction to drugs or alcohol requiring treatment within the last 5 years.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
<b>BOX F – I HAVE/HAVE HAD:</b>		
Recurrent back problems in the last 6 months that limit my everyday activity.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Back or spinal surgery within the last 12 months.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Diabetes, either drug or diet controlled, OR gestational diabetes within the last 12 months.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
An uncorrected hernia that limits my physical abilities.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Active or untreated ulcers, problem wounds, or ulcer surgery within the last 6 months.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
<b>BOX G – I HAVE HAD:</b>		
Ostomy surgery and do not have medical clearance to swim or engage in physical activity.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Dehydration requiring medical intervention within the last 7 days.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Active or untreated stomach or intestinal ulcers or ulcer surgery within the last 6 months.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Frequent heartburn, regurgitation, or gastroesophageal reflux disease (GERD).	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Active or uncontrolled ulcerative colitis or Crohn's disease.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>
Bariatric surgery within the last 12 months.	Yes <input type="checkbox"/> *	No <input type="checkbox"/>

# Diver Medical | Medical Examiner's Evaluation Form

**Participant Name**

**Birthdate**

(Print)

Date (dd/mm/yyyy)

The above-named person requests your opinion of his/her medical suitability to participate in recreational scuba diving or freediving training or activity. Please visit [uhms.org](http://uhms.org) for medical guidance on medical conditions as they relate to diving. Review the areas relevant to your patient as part of your evaluation.

## Evaluation Result

Approved – I find no conditions that I consider incompatible with recreational scuba diving or freediving.

Not approved – I find conditions that I consider incompatible with recreational scuba diving or freediving.

Signature of certified medical doctor or other legally certified medical provider

Date (dd/mm/yyyy)

**Medical Examiner's Name**

(Print)

**Clinical Degrees/Credentials**

**Clinic/Hospital**

**Address**

**Phone**

**Email**

Physician/Clinic Stamp (optional)

Created by the [Diver Medical Screen Committee](#) in association with the following bodies:

**The Undersea & Hyperbaric Medical Society**

**DAN (US)**

**DAN Europe**

**Hyperbaric Medicine Division, University of California, San Diego**



# Diving Medical Guidance to the Physician

These guidelines are typically used by physicians who have been approached by an individual wishing to take part in recreational scuba diving or freediving. They will usually have completed a [WRSTC Diver Medical Participant Questionnaire](#).

Recreational scuba diving and freediving (hereafter "diving") is performed safely by many people. The risks associated with diving may be increased by certain physical conditions, and the relationship to diving may not be readily appreciated by candidates. Thus, it is important to screen divers for such conditions.

A physical examination for diving focuses on conditions that may put a diver at increased risk for decompression sickness, pulmonary overinflation with subsequent arterial gas embolization, and other conditions such as loss of consciousness, which could lead to drowning. Additionally, divers must be able to withstand some degree of thermal stress, the physiological effects of immersion, and have sufficient physical and mental reserves to deal with normal diving and possible emergencies.

The history, review of systems, and physical examination should include as a minimum the points listed below. The list of conditions that might adversely affect the diver is not exhaustive, but contains the most commonly encountered medical problems. The brief introductions serve as an alert to the nature of the risk posed.

The potential diver and his or her physician must weigh the benefits to be had by diving against an increased risk of injury or death due to the individual's medical condition. As with any recreational activity, there are limited data for diving with which to calculate the mathematical probability of injury. Experience and physiological principles only permit a qualitative assessment of relative risk.

For the purposes of this document, **Severe Risk** implies that an individual is believed to be at substantially elevated risk of injury compared with the general population. The consultants involved in drafting this document would generally discourage a candidate with such medical problems from diving. **Relative Risk** refers to a moderate increase in risk, which in some instances may be acceptable. To make a decision as to whether diving is contraindicated for this category of medical problems, physicians must base their judgment on an assessment of the individual candidate. **Temporary Risk** refers to medical problems which may preclude diving but are temporary in nature, allowing the individual to dive after they have resolved.

Following many of the sections is a short list of references that give more information on the topic. The lists are not exhaustive, but examples that may be of particular relevance.

Diagnostic studies and specialty consultations should be obtained as indicated to determine the candidate's status. A list of references is included to aid in clarifying issues that arise.

The following sections are included in this document (click to jump to section):

[BEHAVIORAL HEALTH](#)    [CARDIOVASCULAR SYSTEMS](#)    [GASTROINTESTINAL](#)    [HEMATOLOGICAL](#)  
[METABOLIC AND ENDOCRINOLOGICAL](#)    [NEUROLOGICAL](#)    [ORTHOPEDIC](#)    [OTOLARYNGOLOGICAL](#)    [PULMONARY](#)

## BEHAVIORAL HEALTH

Behavioral health is one of the most difficult aspects of diver candidate evaluation, because many relevant potential problems may not be apparent and are not easily assessed in an office consultation. This is also an aspect of evaluating suitability for diving in which the diving instructor, who observes the candidate in the field, must also play a part.

The diving candidate must be capable of learning and applying a theoretical knowledge base for diving. Significant intellectual handicap is incompatible with independent diving. Medical examiners need to be attuned to both safety and pragmatic considerations associated with learning and developmental disabilities that require special accommodations and/or medication(s). Prospective divers who have been formally diagnosed with a learning or developmental disability may seek medical advice regarding their fitness to dive and can benefit from insight into the potential safety and educational accommodations that may be required. A medical clearance does not constitute a mandate to an instructor to take an individual as a student. Nor does it imply that the prospective diver has undergone a formal learning/developmental disability evaluation, which is outside the scope of these examinations.

The decision to eventually certify an individual as a diver, taking account of a learning/developmental disability and the candidate's capacity to accommodate it in diving is, ultimately, up to the instructor, who will have the opportunity to assess knowledge acquisition and observe the candidate's behavior and performance in the instructional setting.

Motivational and behavioral traits should be considered if there is obvious related history or problems become apparent during training. Candidates who appear unmotivated, irresponsible, or prone to distraction or panic should be discouraged from diving.

A history of psychiatric disease is not in and of itself disqualifying. Psychotropic medications can be problematic if they are associated with altered level of awareness or sedation, or may alter seizure threshold, (e.g., benzodiazepines, narcotics). What is of primary importance is the individual's current psychological state, and anticipated impact of their mental/psychological history relative to their ability to navigate the potential and anticipated challenges and stresses of diving. The level of baseline mental health, with or without medication, is therefore of greater importance than the theoretical effects of a given medication or class of medications while diving.

Candidates with major depression, bipolar disorder, psychoses, or current drug or alcohol abuse should not dive. Even if a candidate is well controlled on medication (see below for discussion of SSRIs), there may be risks associated with the use of potent antidepressant and antipsychotic drugs in the underwater environment. The tendency for potent psychotropic drugs to impair concentration and cause drowsiness is of particular concern, as is their potential to lower the seizure threshold, and the lack of research data evaluating potential interactions with the pressure environment. Candidates with a past history of major psychiatric problems or drug/alcohol abuse who are stable without medication and withdrawn from drugs and alcohol can be considered on a case-by-case basis, preferably by a physician trained in diving medicine.

Perhaps the most challenging group of candidates from a behavioral perspective in the modern context is those with "mild" depression (those who have never been hospitalized for psychiatric treatment or placed on psychiatric hold or attempted self-harm) or those with mood disturbances treated with selective serotonin reuptake inhibitors (SSRIs). The general use of SSRIs has increased dramatically over recent years in many countries. There are no data describing use of SSRIs among divers, but anecdotally the numbers are significant. Concerns over diving while using SSRIs relate to the disorder being treated and to the potential interaction between the drug and diving. There are many candidates taking these drugs whose mild mood disturbance would not of itself constitute a reason to avoid diving. Evaluation of the potential for an interaction between SSRIs and diving is more difficult. There are no published reports of apparent problems despite what is almost certainly a large number of divers using them. Diving while taking an SSRI is probably acceptable provided that: the treated mood disturbance was mild prior to treatment and has been well controlled by the drug; the drug has been used for at least one month without evidence of relevant side effects; and the candidate is fully counseled about (and accepting of) the relevant risks. If the candidate is considering diving beyond the traditional recreational envelope or using gases other than air, he or she should consult an appropriate diving medicine specialist.

There are also potential risks associated with other drugs used to treat psychiatric conditions, including serotonin-norepinephrine reuptake inhibitors (SNRIs), tricyclic antidepressants (TCAs), monoamine oxidase inhibitors (MAOIs), and atypical agents (including bupropion). Candidates on these medications should be evaluated on a case-by-case basis.

## Severe Risk Conditions

- Active major depression, bipolar or psychotic disorder
- History of panic attacks
- Drug or alcohol abuse
- Severe intellectual handicap

## Relative Risk Conditions

- Questionable motivation to dive – solely to please spouse, partner or family member, or to prove oneself in the face of personal fears
- Developmental delay/Cognitive impairment
- Anxiety disorder
- History of drug or alcohol abuse
- History of major depression, bipolar, or psychotic disorder
- Use of psychotropic medications
- Claustrophobia or agoraphobia

## CARDIOVASCULAR SYSTEMS

Diving places increased demands on the heart. Immersion itself results in an increase in cardiac preload, as does peripheral vasoconstriction with an increase in blood pressure. These changes are typically accompanied by sustained mild to moderate exercise. Perhaps not surprisingly, almost 30% of recreational diving fatalities have a cardiac event as the disabling injury. It follows that the primary goals of evaluating the cardiovascular system in a diving candidate are to identify those who appear to be at risk of myocardial ischemic events, myocardial insufficiency, or other cardiac events (such as arrhythmias) that might disable a diver underwater, and to establish that the candidate has an adequate exercise capacity for diving.

With the above in mind, some cardiac diagnoses are considered to render a candidate unsuitable for diving, including: untreated symptomatic coronary artery disease, dilated or obstructive or previous stress cardiomyopathy, congestive heart failure, moderate or worse pulmonary hypertension, long QT syndrome or other arrhythmia-inducing channelopathies, paroxysmal arrhythmias causing unconsciousness or impairment of exercise capacity, poor exercise capacity of apparent cardiac origin, moderate to severe valvular lesions, complex congenital cardiac disease, atrial septal defect, and the presence of an implanted cardiac defibrillator.

Potential candidates with any of the following should be investigated to exclude a disqualifying condition:

- Exertional chest pain, dyspnea, palpitations, or syncope
- Unexplained syncope/near syncope
- Heart murmur
- Hypertension
- Family history of premature death (sudden/unexpected or cardiac) before age 50, cardiac disease before age 50, cardiomyopathy, arrhythmia, or channelopathy

It is strongly recommended that these candidates be evaluated in consultation with a physician trained in diving medicine and possibly a cardiologist. Successful treatment of disqualifying cardiac disorders may result in a candidate becoming suitable for diving. For example, a candidate with coronary artery disease (including previous myocardial infarction) who has been successfully revascularized may be suitable for diving if inducible ischemia can be excluded and adequate exercise capacity demonstrated (for example, in an exercise stress test). The capacity to sustain exercise at 6 MET (metabolic equivalent of task; 1 MET approximates resting metabolic rate, assumed to approximate an oxygen consumption of 3.5 mL/kg/min; 6 MET approximates an effort of six times resting metabolic rate, approximating an oxygen consumption of 21 mL/kg/min is a pragmatic expectation for a recreational diver, but there may be an occasional need to exercise transiently at higher levels during diving. Similarly, a candidate with a history of paroxysmal arrhythmia who has undergone successful pathway ablation may

be suitable for diving. Candidates with any of the above diagnoses who wish to consider diving after appropriate treatment are best referred to a physician trained in diving medicine for evaluation.

Asymptomatic candidates over 45 years of age with risk factors for coronary artery disease should undergo evaluation by a physician. Individuals with a predicted 5-10 year risk of a cardiovascular event >10% using a cardiac risk calculator should be investigated for coronary disease unless they provide a credible history of exercise capacity which renders significant coronary disease very unlikely. A coronary calcium score is a suitable initial investigation, and a myocardial perfusion scan, stress echocardiogram, or CT coronary angiogram should be considered in following up a positive calcium score. Consideration of a tailored investigation pathway for the individual diving candidate is ideally undertaken by a cardiologist in consultation with a physician trained in diving medicine. Candidates who prove to have inducible ischemia or obstructive lesions justifying intervention should not dive until completion of the intervention and demonstration of its success. Candidates with non-obstructive coronary disease not requiring invasive intervention should have aggressive management of risk factors and may be suitable for diving if adequate exercise capacity can be demonstrated. Although an exercise ECG is relatively insensitive to early coronary disease, it has the advantage of demonstrating exercise capacity and can be modified to test sustained exercise at 6 MET.

Left ventricular hypertrophy (LVH) is a risk factor for arrhythmias, which may be induced by exercise or immersion. Candidates for diving with this condition should be counseled about the risks of diving.

A patent foramen ovale (PFO) that exhibits right-to-left shunting with no or minimal provocation is a risk factor for serious neurological decompression sickness. In established divers, such lesions are usually discovered by bubble contrast echocardiography conducted after a relevant episode of decompression sickness. These divers are usually advised either to cease diving, modify their diving to reduce venous bubble formation (venous bubbles crossing from right to left are almost certainly the vectors of harm in this setting), or to have the PFO repaired. Occasionally, new diver candidates have a previously discovered PFO, and in such cases an objective assessment of the shunting behavior of the lesion is required in order to adequately counsel the candidate about the implied risks in diving. If not already done, this is best achieved using bubble contrast transthoracic echocardiography at rest and with provocative maneuvers. It is strongly recommended that the results of such tests are discussed with a physician trained in diving medicine. Routine screening of all diving candidates for PFO is not recommended.

In relation to some specific cardiovascular diagnoses: Treated hypertension with adequate control is acceptable in diving in the absence of other risk factors that would meet a risk threshold indicating screening for coronary artery disease. Atrial fibrillation that is adequately rate-controlled in a candidate without inducible myocardial ischemia and who exhibits adequate exercise capacity is acceptable in diving. However, many such candidates are anticoagulated and the risks of diving whilst anticoagulated would need to be understood and carefully considered by the candidate. This is best achieved through discussion with a physician trained in diving medicine.

Immersion pulmonary edema is a problem that has been seen in swimmers, compressed gas divers, and freedivers. The condition may be under-diagnosed. Risk factors include hypertension, valvular disease, diastolic dysfunction, cardiomyopathies, pulmonary hypertension, hyperhydration, immersion, cold stress, constrictive garments, exercise, and for compressed gas divers, increased breathing resistance (affected by equipment, gas density, and body position), and for freedivers, pulmonary squeeze due to compression during descent. A single episode of immersion pulmonary edema may contra-indicate further diving if no modifiable risk factors are found. Repetitive cases represent a strong contra-indication. A diver or new diving candidate with such a history should be referred to a physician trained in diving medicine for discussion of the relevant issues.

Candidates with pacemakers may be able to dive, though pacemaker-dependent candidates should consider the risks carefully. The pathologic process that necessitated the pacemaker should be considered as should the candidate's functional capacity (see above). Pacemakers must be certified by the manufacturer as able to withstand the pressure changes involved in recreational diving. Devices vary in this regard, but diving beyond 30 meters/100 feet with any of them is unwise.

## Severe Risk Conditions

- Untreated symptomatic coronary artery disease
- Dilated or obstructive cardiomyopathy
- Heart failure
- Pulmonary hypertension
- Long QT syndrome or other arrhythmia-inducing channelopathies
- Paroxysmal arrhythmias causing unconsciousness or impairment of exercise capacity
- Poor exercise capacity of apparent cardiac origin
- Moderate to severe valvular lesions
- Complex congenital cardiac disease
- Atrial septal defect
- Presence of an implanted cardiac defibrillator
- Multiple episodes of immersion pulmonary edema

## Relative Risk Conditions

- Treated coronary artery disease
- Collectively, risk factors such as age >45 years, hypertension, smoking, elevated cholesterol and a positive family history may indicate investigation for coronary artery disease
- History of dysrhythmias requiring medication for suppression
- Mild valvular lesions (need periodic re-evaluation)
- Cardiac prostheses or arrhythmias requiring anticoagulation
- Pacemakers
- Single previous episode of immersion pulmonary edema
- Marfan syndrome or other connective tissue disorder (severe risk if there is a history of dissection)
- Left ventricular hypertrophy

## References

- Denoble PJ, Holm JR, eds. Patent Foramen Ovale and Fitness to Dive Consensus Workshop Proceedings. Durham, NC: Divers Alert Network, 2015; 160 pp.
- Kumar M, Thompson PD. A literature review of immersion pulmonary edema. *Physic Sportsmed.* 2018; 47(2):148-151.
- Lafay V, Trigano JA, Gardette B, Micoli C, Carre F. Effects of hyperbaric exposures on cardiac pacemakers. *Br J Sports Med.* 2008;42(3):212-216
- Mitchell SJ, Bove AA. Medical screening of recreational divers for cardiovascular disease: Consensus discussion at the Divers Alert Network Fatality Workshop. *Undersea Hyperb Med.* 2011; 38(4), 289-296.
- Moon RE, Bove AA, Mitchell SJ. PFO statement. In: Denoble PJ, Holm JR. eds. Patent Foramen Ovale and Fitness to Dive Consensus Workshop Proceedings. Durham, NC: Divers Alert Network, 2016; 156-160.
- Pollock NW. Aerobic fitness and underwater diving. *Diving Hyperb Med.* 2007; 37(3): 118-124.
- Smart D, Mitchell SJ, Wilmshurst P, Turner M, Banham N. Joint position statement on persistent (patent) foramen ovale and diving. South Pacific Underwater Medicine Society (SPUMS) and the United Kingdom Sports Diving Medical Committee (UKSDMC). *Diving Hyperb Med.* 2015; 45(2), 129-131.

## GASTROINTESTINAL

In general terms, there should be no gastrointestinal conditions present that increase the likelihood of vomiting, reflux, bleeding, perforation, diarrhea, or pain. Altered anatomical relationships secondary to surgery or malformations that lead to gas trapping may cause serious problems. Trapped gas expands as the diver surfaces and can lead to rupture or, in the case of the upper GI tract, emesis. Emesis underwater may lead to drowning. Dive activities may take place in areas remote from medical care, and the possibility of acute recurrences of disease must be considered.

## Severe Risk Conditions

- Active inflammatory bowel disease
- Gastric outlet obstruction of a degree sufficient to produce recurrent vomiting
- Chronic or recurrent small bowel obstruction
- Severe gastroesophageal reflux
- Achalasia
- Paraesophageal hernia
- Gastroparesis

## Relative Risk Conditions

- Inflammatory bowel disease when quiescent
- Functional bowel disorders

## Temporary Risk Conditions

- Peptic ulcer disease associated with pyloric obstruction or severe reflux
- Unrepaired hernias of the abdominal wall large enough to contain bowel within the hernia sac could incarcerate

### References

Bennett PB, Cronje FJ, Campbell E, Marroni A, Pollock NW. Assessment of Diving Medical Fitness for Scuba Divers and Instructors. Flagstaff, AZ: Best Publishing. 2006; 241 pp.

Vote D. Gastrointestinal issues – consider them before returning to diving. [https://www.diversalertnetwork.org/medical/articles/Gastrointestinal\\_Issues](https://www.diversalertnetwork.org/medical/articles/Gastrointestinal_Issues)

US Navy Diving Manual, Volume 2, Revision 7. Gastrointestinal distension. NAVSEA 0910-LP-115-1921. Naval Sea Systems Command: Washington, DC, 2016: 3-31-3-32.

## HEMATOLOGICAL

Abnormalities resulting in altered rheological properties may theoretically increase the risk of decompression sickness. Bleeding disorders could worsen the effects of otic or sinus barotrauma and exacerbate the injury associated with inner ear or spinal cord decompression sickness. Spontaneous bleeding into the joints (eg, in hemophilia) may be difficult to distinguish from decompression illness. Thrombophilic disorders (hereditary or acquired) may facilitate vascular thrombosis and susceptibility to DCS.

## Relative Risk Conditions

- Sickle cell disease
- Polycythemia vera
- Leukemia
- Hemophilia/Impaired coagulation
- Recent blood transfusion
- Recent thrombotic episodes
- Hereditary hypercoagulability conditions
  - Factor V Leiden
  - Prothrombin 20210A
  - Protein C deficiency

- Protein S deficiency
- Antithrombin deficiency

## Temporary Risk Conditions

- Prescription of anti-coagulant drugs of any kind, including platelet aggregation inhibitors

### References

Bennett PB, Cronje FJ, Campbell E, Marroni A, Pollock NW. Assessment of Diving Medical Fitness for Scuba Divers and Instructors. Flagstaff, AZ: Best Publishing. 2006; pp 97-104.

Parker J. Haematology. In: The Sports Diving Medical, 2nd Edition. JL Publications, Melbourne 2002, pp 100-102.

Wendling J, et al. Haematological disorders. In: Medical Assessment of Fitness to Dive. International Edition. Hyperbaric Editions CH 2502 Biel, 2001, pp 126. ISBN 3-9522284-1-9.

## METABOLIC AND ENDOCRINOLOGICAL

States of altered hormonal or metabolic function should be assessed according to their impact on the individual's ability to tolerate the moderate exercise requirement and environmental stress of sport diving. Obesity may predispose the individual to decompression sickness, can impair exercise tolerance and is a risk factor for coronary artery disease.

### Severe Risk Conditions

- The potentially rapid change in level of consciousness associated with hypoglycemia in diabetics on insulin therapy or certain oral hypoglycemic medications can result in drowning. Diving is therefore generally contraindicated, except when conducted according to the consensus guidelines for recreational diving with diabetes.
- Pregnancy: The effect of venous emboli formed during decompression on the fetus has been proven to be potentially detrimental to fetus health. Diving is therefore not recommended during any stage of pregnancy or for women actively seeking to become pregnant. (Note that in cases where pregnancy is discovered after diving, it is not considered grounds for termination.)

### Relative Risk Conditions

- Hormonal excess or deficiency
- Obesity
- Renal insufficiency

### References

Damnon F, de Rham M, Baud D. Should a pregnancy test be required before scuba diving? Br J Sports Med. 2016; 50(18): 1159-1160.

Dear GdeL, Pollock NW, Ugucioni DM, Dovenbarger J, Feinglos MN, Moon RE. Plasma glucose response to recreational diving in divers with insulin-requiring diabetes. Undersea Hyperb Med. 2004; 31(3): 291-301.

Held HE, Pollock NW. The risks of diving while pregnant - reviewing the research. Alert Diver. 2007; Mar/Apr: 48-51.

Pollock NW, Ugucioni DM, Dear GdeL. Diabetes and recreational diving: guidelines for the future. Diving Hyperb Med 2006; 36(1): 29-34.

## NEUROLOGICAL

Neurological illnesses, especially those affecting the spinal cord and peripheral nerves, should be assessed according to the degree of functional compromise present. Any condition that diminishes the reserve capacity of the spinal cord may reduce the likelihood of a full functional recovery, should an episode of spinal decompression sickness occur. Conditions in which there can be a waxing and waning of neurological symptoms and signs, such as migraine or demyelinating disease, may contraindicate diving, because an exacerbation or attack of the pre-existing disease (eg, migraine headache with aura) may be difficult to distinguish from neurological decompression

sickness. A history of head injury resulting in unconsciousness should be evaluated for risk of seizure. A diagnosis of epilepsy is considered an absolute contraindication for diving.

## Severe Risk Conditions

Any abnormalities where there is a significant probability of unconsciousness, hence putting the diver at increased risk of drowning. Divers with spinal cord or brain abnormalities where perfusion is impaired may be at increased risk of decompression sickness.

Some conditions are as follows:

- Epilepsy or history of seizures, other than childhood febrile seizures
- History of transient ischemic attack (TIA) or cerebrovascular accident (CVA)
- History of serious (central nervous system, cerebral or inner ear) decompression sickness with residual deficits
- Recurrent episodes of loss of consciousness or fainting

## Relative Risk Conditions

Complicated migraine headaches, particularly if severe, frequent or presenting with neurological manifestations eg, motor, sensory or cognitive disturbance.

- History of head injury with sequelae other than seizure
- Herniated nucleus pulposus
- Intracranial tumor or aneurysm
- Peripheral neuropathy
- Multiple sclerosis
- Trigeminal neuralgia
- History of spinal cord or brain injury
- Parkinson's disease

### References

Bennett PB, Cronje FJ, Campbell E, Marroni A, Pollock NW. Assessment of Diving Medical Fitness for Scuba Divers and Instructors. Flagstaff, AZ: Best Publishing. 2006; 241 pp. 173-188.

Burkett JG, Nahas-Geiger SJ. Diving Headache. *Curr Pain Headache Rep.* 2019;23(7):46.

Massey EW, Moon RE. Neurology and diving. *Handb Clin Neurol.* 2014;120:959-969.

Rosinska J, Łukasik M, Kozubski W. Neurological complications of underwater diving. *Neurol Neurochir Pol.* 2015;49(1):45-51.

UK Diving Medical Committee, Neurological disease. <http://www.ukdmc.org/medical-conditions/neurological-disease/>

## ORTHOPEDIC

Mobility above and under the water is an essential requirement for any sport or recreational diver. Entering the water from shore or a dive boat, underwater propulsion and exiting into a dive boat or onto shore should be possible without great difficulty.

Relative impairment of mobility, particularly on a boat or ashore with equipment weighing up to 30 kg/66 lb (or significantly more in the case of cold water or for more equipment intensive activities, for example), must be assessed. Orthopedic conditions of a degree sufficient to impair exercise performance may increase the risk.

In some cases, like amputations resulting in various degrees of disability, it would be advisable to judge case by case by a physician trained in diving medicine.

## Relative Risk Conditions

- Amputation
- Scoliosis: must also assess impact on respiratory function and exercise performance
- Aseptic necrosis: possible risk of accelerated progression due to the effects of decompression
- Disc prolapse
- Habitual luxation (eg, shoulder, hip, patella)
- Degenerative joint diseases

## Temporary Risk Conditions

- Back pain
- Fractures until complete healing of bone and soft tissue and positive weight bearing tests taking into consideration the weight of the used dive gear on land
- Muscle-tendon and ligament injuries
- Completion of physiotherapy/rehabilitation regimes

### References

Moeller JL. Contraindications to athletic participation. *Physic Sportsmed.* 1996; 24(9): 57-75.

## OTOLARYNGOLOGICAL

Equalization of pressure must take place during ascent and descent between ambient water pressure and the external auditory canal, middle ear, and paranasal sinuses. Failure of this to occur results at least in pain and in the worst-case rupture of the occluded space with disabling and possible lethal consequences. The inner ear is fluid filled and therefore noncompressible. The flexible interfaces between the middle and inner ear, the round and oval windows are, however, subject to pressure changes. Previously ruptured but healed round or oval window membranes may be prone to reinjury with marked overpressurization during vigorous or explosive Valsalva maneuvers. The larynx and pharynx must be free of obstruction to airflow. The laryngeal and epiglottic structures must function normally to prevent aspiration. Mandibular and maxillary function must be capable of allowing the candidate to hold a scuba regulator mouthpiece. Individuals who have had mid-face fractures may be prone to barotrauma and rupture of the air-filled cavities involved.

## Severe Risk Conditions

- Monomeric tympanic membrane (TM)
- Open TM perforation
- Tube myringotomy
- History of stapedectomy
- History of ossicular chain surgery
- History of inner ear surgery
- Facial nerve paralysis secondary to barotrauma
- Inner ear disease other than presbycusis
- Uncorrected upper airway obstruction
- Laryngectomy or status post partial laryngectomy
- Tracheostomy
- Uncorrected laryngocele

- History of vestibular decompression sickness
- Symptomatic nasal or sinus polyps
- Ménière's disease

## Relative Risk Conditions

- Recurrent otitis externa
- Significant obstruction of external auditory canal
- History of significant cold injury to pinna
- Eustachian tube dysfunction
- Recurrent otitis media or sinusitis
- History of TM perforation
- History of tympanoplasty
- History of mastoidectomy
- Significant conductive or sensorineural hearing impairment
- Facial nerve paralysis not associated with barotrauma
- Full prosthodontic devices
- History of mid-face fracture
- Unhealed oral surgery sites
- History of head and/or neck therapeutic radiation
- History of temporomandibular joint dysfunction
- History of round window rupture
- Symptomatic nasal septum deviation
- Recurrent benign positional vertigo
- Otosclerosis

## References

Lechner M, Sutton L, Fishman JM, Kaylie DM, Moon RE, Masterson L, et al. Otorhinolaryngology and diving - part 1: otorhinolaryngological hazards related to compressed gas scuba diving: a review. *JAMA Otolaryngol Head Neck Surg.* 2018;144(3):252-258.

Lechner M, Sutton L, Fishman JM, Kaylie DM, Moon RE, Masterson L, et al. Otorhinolaryngology and diving – part 2: otorhinolaryngological fitness for compressed gas scuba diving: a review. *JAMA Otolaryngol Head Neck Surg.* 2018;144(3):259-263.

Molvaer OI. Otorhinolaryngological aspects of diving. In: Bennett PB, Elliott DH, eds. *Physiology and Medicine of Diving*, 5th ed. Saunders, Edinburgh, 2003. P227-P264.

Wendling J, et al. Otorhinolaryngology. In: *Medical Assessment of Fitness to Dive. International Edition.* Hyperbaric Editions CH 2502 Biel, 2001. Pp25-48. ISBN 3-9522284-1-9.

## PULMONARY

Any process or lesion that impedes airflow from the lungs places the diver at risk for pulmonary over inflation with alveolar rupture and the possibility of cerebral air embolization. Many interstitial diseases predispose to spontaneous pneumothorax: asthma, chronic obstructive pulmonary disease (COPD), cystic or cavitating lung diseases may all cause air trapping.

Undersea and Hyperbaric Medical Society and British Thoracic Society guidelines recommend that asthmatics should be advised not to dive if they have wheeze precipitated by exercise, cold, or emotion. Asthmatic individuals who are currently well controlled and have normal pulmonary function tests may dive if they have a negative exercise test. Many people with asthma have well controlled disease and are physically fit. They may, however, show minor abnormalities on spirometry at rest or after exercise. Those with a history of severe or unpredictable

acute exacerbations are not fit to dive. For those without such a history, the overriding consideration is that the candidate must be physically fit and not impaired after exercise or cold air breathing, which is the normal case of gas expanding from within a scuba cylinder. The best way to assess fitness is with an exercise test. Inhalation challenge tests (eg, using histamine, hypertonic saline or methacholine) are not sufficiently standardized to be interpreted in the context of scuba diving. If persons with breathing issues are cleared to dive, they need to take their regular inhalers and should not dive if suffering symptoms suggestive of exacerbation. Note that the FEV<sub>1</sub>/FVC ratio may be reduced below predicted, but provided there is no deterioration after exercise and the person performs well on the exercise test, a mildly obstructed spirometric tracing on its own is not a contraindication to diving.

A pneumothorax that occurs while diving may be catastrophic. As the diver ascends, trapped gas expands and could produce a tension pneumothorax. In addition to the risk of pulmonary barotrauma, respiratory disease due to either structural disorders of the lung or chest wall or neuromuscular disease may impair exercise performance. Individuals who have experienced spontaneous pneumothorax are at risk of recurrence, and should avoid diving, even after a surgical procedure designed to prevent recurrence (such as pleurodesis). Surgical procedures either do not correct the underlying lung abnormality (eg, pleurodesis, apical pleurectomy) or may not totally correct it (eg, resection of blebs or bullae). A high-resolution CT (HRCT) scan of the lungs may reveal cysts or blebs that represent a risk. Persons who have no parenchymal abnormality on HRCT and have had bilateral surgical pleurodesis (including VATS pleurodesis) may be cleared to dive. However, in most cases, a history of spontaneous pneumothorax will be an absolute contraindication to diving. Traumatic pneumothorax is not a problem as the likelihood of subsequent spontaneous pneumothorax is vanishingly low.

Structural disorders of the chest or abdominal wall or neuromuscular disorders may impair cough, which could be life threatening if water is aspirated. Respiratory limitation due to disease is compounded by the combined effects of immersion (causing a restrictive deficit) and the increase in gas density, which increases in proportion to the ambient pressure (causing increased airway resistance). Formal exercise testing may be helpful.

The emergence of COVID-19 has placed an additional layer of complexity related to fitness to dive evaluations. It is beyond the scope of this document to prescribe or mandate specific tests or timelines related to fitness to dive determinations. What is of importance is awareness of the potential body systems effected by COVID-19, and to take a thoughtful and thorough history related to disease course, time since the infection resolved, and state of physical and mental health at the time of the examination.

Clinical factors that are important to consider include symptom severity during the infection and need for intensive care (e.g., ventilator support). Disease severity likely correlates with the extent of pulmonary injury and potential cardiac involvement, and in the case of intubation, may be associated with severe deconditioning, muscle atrophy and even post-traumatic stress. As such, assessment of the diver with a history of COVID-19, may require more than just a pulmonary evaluation. At the time of this publication, the medical community does not have sufficient data to support arbitrary requirements for specific testing, nor duration of post-infection convalescence after which individuals can be considered safe to return to diving.

**The following documents provide current guidance on investigation of COVID-19 patients prior to diving. This is an area that is evolving and updated often; please see these resources for more current information and considerations regarding these issues.**

[UC San Diego Guidelines for Evaluation of Divers during COVID-19 pandemic](#)

[Centers for Disease Control and Prevention, People Who Are at Higher Risk for Severe Illness](#)

[European Committee for Hyperbaric Medicine and European Underwater and Baromedical Society, COVID-19 Pandemic – Position Statements](#)

*For those looking for aseptic practices, the following resources may be useful:*

[Divers Alert Network Europe](#)

[Divers Alert Network Americas](#)

## Severe Risk Conditions

- History of spontaneous pneumothorax (see notes)
- Impaired exercise performance due to respiratory disease
- Respiratory impairment secondary to cold gas breathing
- Pulmonary hypertension

## Relative Risk Conditions

- Asthma, reactive airway disease (RAD), exercise-induced bronchospasm (EIB) or COPD (see notes)
- Solid, cystic or cavitating lesion
- Pneumothorax secondary to:
  - Thoracic surgery
  - Trauma or pleural penetration (see notes)
  - Previous overinflation injury
- Obesity
- History of immersion pulmonary edema or restrictive disease
- Interstitial lung disease: may increase the risk of pneumothorax and likely to limit exertion
- Sleep apnea

### References

Godden D, Currie G, Denison D, Farrell P, Ross J, Stephenson R, Watt S, Wilmshurst P. British Thoracic Society guidelines on respiratory aspects of fitness for diving. *Thorax*. 2003;58:3-13.

## DIVERS ALERT NETWORK (DAN)

Divers Alert Network (DAN), a non-profit organization, provides medical information and advice for the benefit of the diving public. DAN is not a regulatory agency and does not set physical standards or guidelines for scuba diving. The responsibility for the decision of whether or not to dive is generally left up to the individual, the physician, as well as the dive provider. This decision, however, should be based on the most current diving medical information available.

DAN may be able to provide current medical literature and information that can be used to assist in this decision-making process. If desired, DAN may also provide referrals to local physicians who are knowledgeable in dive medicine and physiology. However, DAN cannot and does not decide whether an individual may or may not participate in the sport of scuba diving. For more information, please feel free to contact one of the DAN offices listed below.

### DAN America (US)

Physicians and other medical professionals associated with DAN America are available for consultation by phone, during normal business hours Monday through Friday, 8:00 AM to 8:00 PM Eastern Time US.

+1-919-684-2948 ext. 6222

[www.DAN.org](http://www.DAN.org)

### DAN Europe (Italy)

+39-085-8930333

[www.DANEurope.org](http://www.DANEurope.org)

### DAN Asia-Pacific (Australia)

+61-3-9886-9166

[www.DANAP.org](http://www.DANAP.org)

### DAN Southern Africa (South Africa)

+27-11-266-4900

[www.DANSA.org](http://www.DANSA.org)

### DAN Japan (Yokohama)

+045-228-3066 Medical Information Line service is provided in Japanese only.

[www.dan-japan.gr.jp](http://www.dan-japan.gr.jp)

*These guidelines were created by the Diving Medical Screen Committee (DMSC). The DMSC periodically reviews them to ensure they continue to represent current best practice in hyperbaric medicine.*



# General Liability Release and Express Assumption of Risk

1321 SE Decker Ave Stuart, FL 34994  
Phone: 888-778-9073 Fax: 877- 436-7096  
Email [worldhq@tdisdi.com](mailto:worldhq@tdisdi.com) www.tdisdi.com

For \_\_\_\_\_ (specify Course or Specialty) training program under sanction through SDI.  
Please read carefully, fill in all blanks and initial each paragraph before signing at bottom.

I, \_\_\_\_\_, hereby affirm that I have been advised and thoroughly informed of the inherent hazards of scuba diving activities

\_\_\_\_\_ Further, I understand that diving with compressed air or oxygen enriched air (nitrox) involves certain inherent risks including decompression sickness, embolism, oxygen toxicity, inert gas narcosis, marine life injuries or other barotrauma/hyperbaric injuries can occur that require treatment in a recompression chamber. I further understand that the open water diving trips, which are necessary for training and certification, may be conducted at a site that is remote, either by time of distance or both, from such a recompression chamber. I still choose to proceed with such instructional dives in spite of the possible absence of a recompression chamber in proximity to the dive site.

\_\_\_\_\_ I understand and agree that neither my Instructor(s) \_\_\_\_\_, the facility through which I received my Instruction, \_\_\_\_\_, International Training and Scuba Diving International, nor the officers, directors, shareholders, affiliated companies, employees, agents, or assigns of the above listed entities and/or individuals, nor the authors of any materials including texts and tables expressly used for training and certification (hereinafter referred to as "Released Parties") may be held liable or responsible in any way for any injury, death, or other damages to me or my family, heirs, or assigns that may occur as a result of my participation in this diving class or as a result of the negligence of any party, including the Released Parties, whether passive or active.

\_\_\_\_\_ In consideration of being allowed to enroll in this course, I hereby personally assume all risks in connection with said course, for any harm, injury, or damage that may befall me while I am enrolled as a student of this course, including all risks connected therewith, whether foreseen or unforeseen.

\_\_\_\_\_ I further agree to save, defend, indemnify, and hold harmless said course and Released Parties from any claim or lawsuit by me, anyone purporting to act on my behalf, my family, estate, heirs or assigns, arising directly or indirectly out of my enrollment and participation in this course including both claims arising during the course or after I receive my certification even if such claims may be groundless, false or fraudulent.

\_\_\_\_\_ I also understand that diving activities are physically strenuous and that I will be exerting myself during this diving course, and that if I am injured as a result of heart attack, panic, hyperventilation, oxygen toxicity, inert gas narcosis, drowning, etc. that I expressly assume the risk of said injuries and that I will not hold the above listed individuals or companies responsible for the same, and I agree to defend, indemnify, and hold harmless said course and Released Parties for any such injuries incurred by me.

\_\_\_\_\_ I understand that these activities may place me deeper than I am able to safely execute a free (without breathing gas) ascent from.

\_\_\_\_\_ I understand that I may be required to furnish my own equipment and that I am responsible for its operating condition and maintenance.

\_\_\_\_\_ I further state that I am of lawful age and legally competent to sign this liability release, or that I have acquired the written consent of my parent or guardian.

\_\_\_\_\_ I understand that the terms herein are contractual and not a mere recital, and that I have signed this document of my own free act. Further that I understand and agree that, in the event that one or more of the provisions of this agreement, for any reason, is held by a court of competent jurisdiction to be invalid or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision hereof, and this agreement shall be construed as if such invalid, illegal or unenforceable provision or provisions had never been contained herein.

IT IS THE INTENTION OF \_\_\_\_\_ BY THIS INSTRUMENT TO EXEMPT AND RELEASE MY INSTRUCTORS, \_\_\_\_\_ (AND OTHERS, \_\_\_\_\_), THE FACILITY THROUGH WHICH I RECEIVED MY INSTRUCTION \_\_\_\_\_, THE TRAINING AGENCY \_\_\_\_\_ AND INTERNATIONAL TRAINING AND SCUBA DIVING INTERNATIONAL, AND ALL OTHER RELATED ENTITIES AND RELEASED PARTIES AS DEFINED ABOVE, FROM ALL LIABILITY OR RESPONSIBILITY WHATSOEVER FOR PERSONAL INJURY, PROPERTY DAMAGE OR WRONGFUL DEATH HOWEVER CAUSED, OR ARISING OUT OF, DIRECTLY OR INDIRECTLY, INCLUDING, BUT NOT LIMITED TO, THE NEGLIGENCE OF THE RELEASED PARTIES, WHETHER PASSIVE OR ACTIVE. I HAVE FULLY INFORMED MYSELF OF THE CONTENTS OF THIS LIABILITY RELEASE AND EXPRESS ASSUMPTION OF RISK BY READING IT BEFORE SIGNING IT ON BEHALF OF MYSELF AND MY HEIRS.

This document is required for all courses and Specialties taught under sanction by Scuba Diving International.  
No alterations, changes, omissions or revisions may be made.

\_\_\_\_\_  
Signature of Student/Participant / Date

\_\_\_\_\_  
Signatures of Parents or Guardians / Date  
(where applicable)

\_\_\_\_\_  
Witness / Date

# WATER/POOL FACILITY WAIVER AND RELEASE OF LIABILITY

GIGGLIN' MARLIN DIVERS, INC.

Please be aware: By signing this document, you are waiving certain legal rights, including the right to sue.

Please read and be certain you understand the implications of signing this document. This form is to be used for all water related recreations activities, including, but not limited to, swimming, wading, snorkeling, scuba diving, diving and other social activities.

I, \_\_\_\_\_ ("Releasing Party") do hereby affirm and acknowledge the inherent hazards and risks associated with activities in or around water, as well as at the facility and on the property of Gigglin' Marlin Divers, Inc. ("Released Party"). I fully understand that these risks can lead to severe injury and even death.

In consideration of permitting me, Releasing Party, to participate in activities on the property and at the facility of Released Party. I agree as follows:

I, for myself, my personal representatives, heirs and next of kin do HEREBY acknowledge that water related recreational activities, including, but not limited to, swimming, wading, snorkeling, scuba diving, diving and other social activities ("Activities") ARE POTENTIALLY DANGEROUS ACTIVITIES and involve the risk of serious injury and/or death and/or property damage;

***HEREBY RELEASE, WAIVE, DISCHARGE AND AGREE NOT TO SUE Released Party, its facility, or any of its officers, instructors, agents or employees, including scuba and/or swim instructors (the Releasees) from all liability resulting in any loss or damage, and any claim or demand arising out of or relating to any injury to my person or property or resulting in my death, now and forever, arising out of or related to participation in said Activities, whether caused by the negligence of the Released Party and/or Releasees, or otherwise;***

***HEREBY EXPRESSLY ASSUME FULL RESPONSIBILITY FOR ANY RISK OF BODILY INJURY, WRONGFUL DEATH OR PROPERTY DAMAGE, now and forever, arising out of, or related to participation in said Activities, where foreseen or unforeseen and whether caused by the negligence of the Release Parties and/or Releasees, or otherwise;***

***HEREBY acknowledge that INJURIES RECEIVED MAY BE COMPOUNDED OR INCREASED BY NEGLIGENT RESCUE OPERATIONS OR PROCEDURES OF THE RELEASEES and agree that this Waiver of Claims, Release of Liability, Express Assumption of Risk, and Indemnity Agreement extends to all acts of negligence by Released Party and/or Releasees, INCLUDING NEGLIGENT RESCUE OPERATIONS and is intended to be as broad and inclusive as permitted by the law of the Province or State in which the activities are conducted;***

I EXPRESSLY agree to INDEMNIFY and SAVE and HOLD HARMLESS the Released Party and/or Releasees from any loss, liability, damage or cost that they may incur, now and forever, arising out of the Activities, ***whether foreseen or unforeseen and whether caused by the negligence of the Released Parties and/or Releasees,*** or otherwise;

If any provision of this document is found to be unenforceable or invalid, that provision shall be severed from this contract. The remainder of this contract will then be construed as though the unenforceable provision had never been contained in this document. In executing this document, I am not relying on any oral or written representations of statements made by the Released Party and/or Releasees, other than what is set forth in this agreement.

I, Releasing Party, hereby declare that I have read the Waiver of Claims, Release of Liability, Express Assumption of Risk, and Indemnity Agreement and fully understand that I have given up substantial rights by signing it. I am aware of its legal consequences, and have signed it freely and voluntarily without inducement, assurance, or guarantee being made to me and intend my signature to be complete and unconditional release of all liability to the greatest extent allowed by law. I hereby declare that I am of legal age and am competent to sign this agreement or, if not, that my parent or legal guardian shall sign on my behalf, and that my guardian or parent is in complete understanding and concurrence with this agreement.

By checking this box, you opt out of receiving monthly newsletter.

This Release shall be effective for the time period specified in the Effective Dates set out below.

## RELEASING PARTY:

\_\_\_\_\_  
(PLEASE PRINT) (SIGNATURE) (DATE)

(E-MAIL) \_\_\_\_\_ (PHONE) \_\_\_\_\_

EMERGENCY CONTACT: (NAME) \_\_\_\_\_ (PHONE) \_\_\_\_\_

(RELATIONSHIP) \_\_\_\_\_

As parent or guardian, I am signing this document on behalf of my minor child/children (specified by name below) and agree to be specifically bound to all the terms and conditions of this agreement. I have read the agreement, fully understand the terms herein, understand that I have given up substantial rights by signing it, am aware of its legal consequences, and have signed this document freely and voluntarily without inducement, assurance or guarantee being made to me. I intend my signature to be complete and unconditional release of all liability to the greatest extent allowed by law and further agree to indemnify and save and hold harmless Released Party and Releasees.

MINOR CHILD/CHILDREN \_\_\_\_\_

PARENT/GUARDIAN NAME \_\_\_\_\_  
(PLEASE PRINT) (SIGNATURE REQUIRED) (DATE)



# HEALTH DECLARATION FORM / COVID-19

Read this statement prior to signing it. You must complete this additional medical questionnaire to enrol in a diver training program or to participate in any diving activity. If you are a minor, you must have this statement signed by your parent or guardian.

## DIVER MEDICAL QUESTIONNAIRE

The purpose of this medical questionnaire is to ensure that you are medically fit to dive. Please answer the following questions with a YES or NO. If you are not sure, answer YES. A positive response means that there may be a preexisting condition that could affect your safety while diving. If any of these items apply to you, we must request that you consult with a physician, preferably a specialist in diving medicine, prior to participating in diving activities.

Within the 40 days immediately preceding the date of this Health Declaration Form, have you:

1. TESTED POSITIVE OR PRESUMPTIVELY POSITIVE WITH COVID-19 (THE NEW CORONAVIRUS OR- SARS-COV2) OR BEEN IDENTIFIED AS A POTENTIAL CARRIER OF THE CORONAVIRUS?  
 YES     NO
2. EXPERIENCED ANY SYMPTOMS COMMONLY ASSOCIATED WITH COVID-19 (FEVER; COUGH; FATIGUE OR MUSCLE PAIN; DIFFICULTY BREATHING; SORE THROAT; LUNG INFECTIONS; HEADACHE; LOSS OF TASTE; OR DIARRHEA)?  
 YES     NO
3. BEEN IN ANY LOCATION/SITE DECLARED AS HAZARDOUS WITH AND/OR POTENTIALLY INFECTIVE WITH THE NEW CORONAVIRUS BY A RECOGNISED HEALTH OR REGULATORY AUTHORITY?  
 YES     NO
4. BEEN IN DIRECT CONTACT WITH OR IN THE IMMEDIATE VICINITY OF ANY PERSON WHO TESTED POSITIVE WITH THE NEW CORONAVIRUS OR WHO WAS DIAGNOSED AS POSSIBLY BEING INFECTED BY THE NEW CORONAVIRUS?  
 YES     NO

The information I have provided about my medical history is accurate to the best of my knowledge. I agree to accept responsibility for any omissions in disclosing my existing or past health conditions.

I also commit to inform \_\_\_\_\_ about any symptom that may arrive after having filled in this declaration and/or having come into contact with someone who has tested positive after signing the declaration.

Full Name

Date

Guardian's Full Name

Date

Signature

Signature

## ADDITIONAL DECLARATIONS / COVID-19

I WILL, if asked, wear a protective mask at all times while participating in the diving training / activities arranged by \_\_\_\_\_, and will take all reasonable preventive steps that may be recommended by \_\_\_\_\_, or any relevant public authority.

I WILL accept and observe all instructions by \_\_\_\_\_ intended to abide by all existing regulations, required to help prevent the risk of transmission, including having my temperature taken prior to participating in any diving activities.

I ACKNOWLEDGE and ACCEPT that this declaration will be considered as my consent to \_\_\_\_\_ o retain this declaration and disclose it to any relevant authority or service provider for the purposes of ensuring the safety of any third parties that may come in contact with me prior to, during, and after any diving activity.

Full Name

Date

Guardian's Full Name

Date

Signature

Signature



# PLEASE NOTE

COVID-19 shares many of the same symptoms as other serious viral pneumonias that require a period of convalesce before returning to full activities – a process that can take weeks or months depending on symptom severity (1).

## MEDICAL RECOMMENDATIONS (2, 3):

- Divers who have tested positive with COVID-19 but have remained completely asymptomatic, should wait ONE month before resuming diving.
- Divers who have had symptomatic COVID-19, should wait at least THREE months before applying for fit-to-dive clearance conducted by a diving medicine specialist.
- Divers who have been hospitalised with or because of pulmonary symptoms in relation to COVID-19, should wait at least THREE months before applying for fit-to-dive clearance conducted or coordinated by a diving medicine specialist, with complete pulmonary function testing (at least FVC, FEV1, PEF25-50-75, RV and FEV1/FVC, and an exercise test with peripheral oxygen saturation measurement) as well as a high resolution CT scanning of the lungs.
- Divers who have been hospitalised with or because of cardiac problems in relation to COVID-19, should wait at least THREE months before applying for fit-to-dive clearance conducted or coordinated by a diving medicine specialist with cardiac evaluation, including echocardiography and exercise test (exercise electrocardiography).

## GENERAL RECOMMENDATION

- Divers and dive centers should observe strictly the guidelines for disinfection of diving gear (as issued by the diving federations and DAN Europe / Divers Alert Network).

## REFERENCES

- (1) [Return to Diving Post COVID-19](#) - issued by the Undersea and Hyperbaric Medical Society (UHMS) in the USA.
- (2) [Diving after COVID-19 pulmonary infection](#). A position statement of the Belgian Society for Diving and Hyperbaric Medicine (SBMHS-BVOOG).
- (3) [Recreational and professional diving after the Coronavirus disease \(COVID-19\) outbreak](#) - Position statement of EUBS & ECHM

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The present is a sample of a Health Declaration Form that a dive centre or dive professional may want to adopt and submit to customers and students, before taking up any diving activity with them.

The Form has been developed by the DAN Europe Medical Division team, based on information available as of May 2020. The epidemiological situation is constantly evolving. As a result, this document may be subject to changes and updates.