



Liability Release and Express Assumption of Risk for Technical Diving

Please read carefully, fill in all blanks and initial each paragraph before signing.

I, _____, HEREBY DECLARE THAT I AM A CERTIFIED
(Participant)

SCUBA DIVER, TRAINED IN SAFE DIVING PRACTICES INCLUDING THE USE OF NITROX, AND AM AWARE OF THE INHERENT HAZARDS OF SCUBA DIVING.

_____ I further state that I am an experienced diver and have been certified by the following training organization(s): _____ and that I am aware of the required certification or equivalent experience required to participate in technical diving activities. I have been a certified diver since _____, and have been diving for _____ years, with a total of approximately _____ dives, to a maximum depth of _____ metres/feet (circle one).

_____ I further declare that I have been advised and thoroughly informed of the inherent hazards of participating in technical and recreational scuba diving activities, and in consideration of being allowed to participate in this activity, I hereby assume all risks in connection with said activity, for any harm, injury or damage that I may suffer while I am participating in this activity, including all risks connected therewith, whether foreseen or unforeseen.

_____ I further declare that I am properly trained, thoroughly informed, and completely understand the inherent hazards of Technical Scuba Diving activities, including the risk of serious injury or death. Further, I understand that diving with compressed air, oxygen-enriched air (nitrox) trimix, and 100 percent oxygen involves certain inherent risks that include but are not limited to: decompression sickness, embolism, oxygen toxicity, inert gas narcosis, marine life injuries, fire and/or explosion hazards, and barotrauma or hyperbaric injuries which can occur and require treatment in a recompression chamber. I further understand that Technical Scuba Diving activities may be conducted at a site that is remote, either by time or distance or both, from such a recompression chamber. I still choose to participate in such Technical Scuba Diving activities, despite the possible absence of a recompression chamber in proximity to the dive site.

_____ I further declare that I understand Technical Diving involves risks which exceed those encountered in recreational scuba diving. These risks may include but are not limited to: depths which exceed the limits of recreational diving; decompression procedures; over-head environments and/or the risk of entanglement which may prevent direct ascent to the surface in the event of an emergency; sudden loss of visibility; necessity for computing both nitrogen and oxygen loading to plan dives; and the need for specialized training, equipment, and planning for different types of Technical Scuba Diving. I understand that Technical Scuba Diving may involve a greater risk of serious injury or death than recreational scuba diving, and I assume the risk of this activity.

_____ I understand that I AM SOLELY RESPONSIBLE FOR ENSURING MY OWN SAFETY DURING PARTICIPATION IN THIS ACTIVITY and agree that: 1) the facility(ies), organization(s) or supervisory personnel offering this activity, _____, or their employees; 2) the organizers or promoters of this event; 3) Diving Science and Technology Corp. (DSAT); and 4) International PADI Inc. (PADI), its affiliate or subsidiary corporations, any of their respective employees, officers, agents or assigns (1 through 4 hereinafter referred to as "Released Parties"), may not 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 activity, or as a result of the negligence of any party, including the Released Parties, whether passive or active.

_____ I declare that I am in good mental and physical fitness for diving, that I am not under the influence of alcohol, nor am I under the influence of any drugs that are contraindicated to diving. If I am taking any medication, I declare that I have seen a physician and have approval to dive under the conditions of this activity while under the influence of the medication/drugs.

_____ I understand that all types of scuba diving, including Technical Diving, are physically strenuous activities and that I will be exerting myself during this activity; and if I am injured as a result of heart attack, panic, hyperventilation, etc. that I assume the risk of said injuries and that I will not hold the Released Parties responsible for the same.

_____ I will inspect all of my equipment prior to every use during this activity, ensuring that I have all necessary equipment, and that it is functioning properly. I will not hold the Released Parties responsible for my failure to inspect my equipment prior to diving.

_____ I further save and hold harmless the Released Parties from any claim or lawsuit for personal injury, property damage or wrongful death, by me, my family, estate, heirs, or assigns, arising out of my participation in this activity, including both claims arising during the activity or after I complete the activity.

_____ I further declare 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 further agree that if any portion of this Agreement is held to be invalid for any reason that the remaining provisions shall remain in full force and effect.

I, _____, understand and agree that the terms herein are contractual and not a mere recital, that this instrument is a legally binding document, and that I have signed this document of my own free act, after reading and understanding the entire Liability Release and Express Assumption of Risk agreement.

(Date)

(Signature of Participant)

(Date)

(Signature of Parent or Guardian if applicable)

(Date)

(Witness)





Tec Diver Statement of Understanding and Learning Agreement

This statement informs you of hazards, risks and your responsibilities for participating in the DSAT Tec Diver course. Your signature acknowledges that you accept these risks and responsibilities.

I, _____, understand that as a DSAT Tec Diver I should:

1. Maintain good mental and physical health for diving. Refrain from being under the influence of alcohol or drugs when tec diving. Stay proficient in diving skills, in particular, the skills required for certification as a DSAT Tec Diver.
2. Engage only in diving activities consistent with my training and experience.
3. Use complete, well-maintained, reliable equipment for which I have appropriate training.
4. Adhere to the team diving concept, but always be prepared to complete any dive without the assistance of a team mate. Although self sufficient, the responsible tec diver dives as part of a team and adheres to team diving principles.
5. Maintain the proper attitude during training in which I agree to:
 - Follow the instructor's directions and dive plans strictly, and not to separate from the instructor or my dive team.
 - Refrain from tec diving outside this course until I am fully qualified and certified.
 - Accept the risk for this type of diving, and for specific risks unique to each dive environment, and to immediately notify the instructor if this risk becomes intolerable for me.
 - Recognize the desirability of carrying diver accident insurance that covers tec diving (if available in my local area), and recognize that my instructor may require me to have it.
6. Demonstrate self sufficiency – plan each dive as though it will be necessary to make the dive and handle all emergencies alone.
7. Demonstrate discipline and an attitude consistent with responsible technical diving – I will not cut corners, bend the rules, disregard dive plans, omit safety equipment or exceed the limits of my training.
8. Obtain an orientation when diving in new environments.
9. Know, obey and respect local diving laws and regulations including private land owner relations.
10. Accept the responsibility for my personal safety, while accepting and acknowledging the risks, and demands tec diving imposes.
11. Stay informed on and dive according to the state of the art in diving, tec diving, dive rescue, dive equipment and other influences on my safety as a tec diver.
12. Accept that technical scuba diving has many general risks and hazards that either don't exist in recreational diving, or aren't as severe, including:
 - No direct access to the surface in an emergency due to decompression requirements.
 - Hypoxia/hyperoxia resulting from switching to the wrong gas, which can lead to drowning.
 - Narcosis, which can lead to poor judgment/bad decisions that can cause an accident.
 - DCS due to improper gas analysis, missed deco stops, loss of deco gas and individual susceptibility. DCS can cause permanent injury or death.
 - Omitted procedures due to task loading, which can lead to accidents, DCS, air embolism, oxygen toxicity, or drowning.
 - Drowning or air embolism due to BCD failure.
 - Extensive equipment requirements with redundant configurations, which can lead to ergonomic complexity, increased risk of error and a physical burden.
13. I accept that a significant difference exists between recreational scuba diving and technical scuba diving, and that in technical scuba diving, even if you do everything right, there is still a higher inherent potential for an accident leading to permanent injury or death.
14. I accept that physical fitness affects my performance and ability as a tec diver. Lack of the physical fitness required can affect my safety by limiting my ability to respond to an emergency, or by directly leading to injuries. It is my responsibility to stay fit to dive, and to dive with the limits of my fitness.

I have read the above statements and have had any questions answered to my satisfaction. I understand the importance and purpose of these practices and recognize they are for my own safety and well being.

I understand that failing to adhere to the above statements will put me at risk, and may be grounds for my dismissal from the Tec Deep Diver course. I acknowledge that the instructor is not permitted to and will not certify me if I don't meet all course performance requirements or if I demonstrate an attitude or behavior incompatible with responsible technical diving practices.

Participant Signature

Day/Month/Year



MEDICAL STATEMENT

Participant Record (Confidential Information)

Please read carefully before signing.

This is a statement in which you are informed of some potential risks involved in scuba diving and of the conduct required of you during the scuba training program. Your signature on this statement is required for you to participate in the scuba training program offered

by _____ and
Instructor

_____ located in the
Facility

city of _____, state/province of _____.

Read this statement prior to signing it. You must complete this Medical Statement, which includes the medical questionnaire section, to enroll in the scuba training program. If you are a minor, you must have this Statement signed by a parent or guardian.

Diving is an exciting and demanding activity. When performed correctly, applying correct techniques, it is relatively safe. When

established safety procedures are not followed, however, there are increased risks.

To scuba dive safely, you should not be extremely overweight or out of condition. Diving can be strenuous under certain conditions. Your respiratory and circulatory systems must be in good health. All body air spaces must be normal and healthy. A person with coronary disease, a current cold or congestion, epilepsy, a severe medical problem or who is under the influence of alcohol or drugs should not dive. If you have asthma, heart disease, other chronic medical conditions or you are taking medications on a regular basis, you should consult your doctor and the instructor before participating in this program, and on a regular basis thereafter upon completion. You will also learn from the instructor the important safety rules regarding breathing and equalization while scuba diving. Improper use of scuba equipment can result in serious injury. You must be thoroughly instructed in its use under direct supervision of a qualified instructor to use it safely.

If you have any additional questions regarding this Medical Statement or the Medical Questionnaire section, review them with your instructor before signing.

Divers Medical Questionnaire

To the Participant:

The purpose of this Medical Questionnaire is to find out if you should be examined by your doctor before participating in recreational diver training. A positive response to a question does not necessarily disqualify you from diving. A positive response means that there is a preexisting condition that may affect your safety while diving and you must seek the advice of your physician prior to engaging in dive activities.

- _____ Could you be pregnant, or are you attempting to become pregnant?
- _____ Are you presently taking prescription medications? (with the exception of birth control or anti-malarial)
- _____ Are you over 45 years of age and can answer YES to one or more of the following?
 - currently smoke a pipe, cigars or cigarettes
 - have a high cholesterol level
 - have a family history of heart attack or stroke
 - are currently receiving medical care
 - high blood pressure
 - diabetes mellitus, even if controlled by diet alone

Have you ever had or do you currently have...

- _____ Asthma, or wheezing with breathing, or wheezing with exercise?
- _____ Frequent or severe attacks of hayfever or allergy?
- _____ Frequent colds, sinusitis or bronchitis?
- _____ Any form of lung disease?
- _____ Pneumothorax (collapsed lung)?
- _____ Other chest disease or chest surgery?
- _____ Behavioral health, mental or psychological problems (Panic attack, fear of closed or open spaces)?
- _____ Epilepsy, seizures, convulsions or take medications to prevent them?
- _____ Recurring complicated migraine headaches or take medications to prevent them?
- _____ Blackouts or fainting (full/partial loss of consciousness)?
- _____ Frequent or severe suffering from motion sickness (seasick, carsick, etc.)?

Please answer the following questions on your past or present medical history with a **YES** or **NO**. If you are not sure, answer **YES**. If any of these items apply to you, we must request that you consult with a physician prior to participating in scuba diving. Your instructor will supply you with an RSTC Medical Statement and Guidelines for Recreational Scuba Diver's Physical Examination to take to your physician.

- _____ Dysentery or dehydration requiring medical intervention?
- _____ Any dive accidents or decompression sickness?
- _____ Inability to perform moderate exercise (example: walk 1.6 km/one mile within 12 mins.)?
- _____ Head injury with loss of consciousness in the past five years?
- _____ Recurrent back problems?
- _____ Back or spinal surgery?
- _____ Diabetes?
- _____ Back, arm or leg problems following surgery, injury or fracture?
- _____ High blood pressure or take medicine to control blood pressure?
- _____ Heart disease?
- _____ Heart attack?
- _____ Angina, heart surgery or blood vessel surgery?
- _____ Sinus surgery?
- _____ Ear disease or surgery, hearing loss or problems with balance?
- _____ Recurrent ear problems?
- _____ Bleeding or other blood disorders?
- _____ Hernia?
- _____ Ulcers or ulcer surgery ?
- _____ A colostomy or ileostomy?
- _____ Recreational drug use or treatment for, or alcoholism in the past five years?

The information I have provided about my medical history is accurate to the best of my knowledge. I agree to accept responsibility for omissions regarding my failure to disclose any existing or past health condition.

Signature _____ Date _____ Signature of Parent or Guardian _____ Date _____

STUDENT

Please print legibly.

Name _____ Birth Date _____ Age _____
First Initial Last Day/Month/Year

Mailing Address _____

City _____ State/Province/Region _____

Country _____ Zip/Postal Code _____

Home Phone () _____ Business Phone () _____

Email _____ FAX _____

Name and address of your family physician

Physician _____ Clinic/Hospital _____

Address _____

Date of last physical examination _____

Name of examiner _____ Clinic/Hospital _____

Address _____

Phone () _____ Email _____

Were you ever required to have a physical for diving? Yes No If so, when? _____

PHYSICIAN

This person applying for training or is presently certified to engage in scuba (self-contained underwater breathing apparatus) diving. Your opinion of the applicant's medical fitness for scuba diving is requested. There are guidelines attached for your information and reference.

Physician's Impression

I find no medical conditions that I consider incompatible with diving.

I am unable to recommend this individual for diving.

Remarks _____

Physician's Signature or Legal Representative of Medical Practitioner Date _____
Day/Month/Year

Physician _____ Clinic/Hospital _____

Address _____

Phone () _____ Email _____

Guidelines for Recreational Scuba Diver's Physical Examination

Instructions to the Physician:

Recreational **SCUBA** (Self-Contained Underwater Breathing Apparatus) can provide recreational divers with an enjoyable sport safer than many other activities. The risk of diving is increased by certain physical conditions, which the relationship to diving may not be readily obvious. Thus, it is important to screen divers for such conditions.

The **RECREATIONAL SCUBA DIVER'S PHYSICAL EXAMINATION** focuses on conditions that may put a diver at increased risk for decompression sickness, pulmonary overinflation syndrome with subsequent arterial gas embolization and other conditions such as loss of consciousness, which could lead to drowning. Additionally, the diver must be able to withstand some degree of cold stress, the physiological effects of immersion and the optical effects of water and have sufficient physical and mental reserves to deal with 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 all-inclusive, but contains the most commonly encountered medical problems. The brief introductions should serve as an alert to the nature of the risk posed by each medical problem.

The potential diver and his or her physician must weigh the pleasures to be had by diving against an increased risk of death or injury due to the individual's medical condition. As with any recreational activity, there are no data for diving enabling the calculation of an accurate 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 decompression sickness, pulmonary or otic barotrauma or altered consciousness with subsequent drowning, compared with the general population. The consultants involved in drafting this document would generally discourage a student 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 judgement on an assessment of the individual patient. Some medical problems which may preclude diving are **temporary** in nature or responsive to treatment, allowing the student to dive safely after they have resolved.

Diagnostic studies and specialty consultations should be obtained as indicated to determine the diver's status. A list of references is included to aid in clarifying issues that arise. Physicians and other medical professionals of the Divers Alert Network (DAN) associated with Duke University Health System are available for consultation by phone +1 919 684 2948 during normal business hours. For emergency calls, 24 hours 7 days a week, call +1 919 684 8111 or +1 919 684 4DAN (collect). Related organizations exist in other parts of the world – DAN Europe in Italy +39 039 605 7858, DAN S.E.A.P. in Australia +61 3 9886 9166 and Divers Emergency Service (DES) in Australia +61 8 8212 9242, DAN Japan +81 33590 6501 and DAN Southern Africa +27 11 242 0380. There are also a number of informative websites offering similar advice.

NEUROLOGICAL

Neurological abnormalities affecting a diver's ability to perform exercise should be assessed according to the degree of compromise. Some diving physicians feel that conditions in which there can be a waxing and waning of neurological symptoms and signs, such as migraine or demyelinating disease, contraindicate diving because an exacerbation or attack of the preexisting disease (e.g.: a migraine 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.

Relative Risk Conditions

- **Complicated Migraine Headaches whose symptoms or severity impair motor or cognitive function, neurologic manifestations**
- **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**

Temporary Risk Condition

History of cerebral gas embolism without residual where pulmonary air trapping has been excluded and for which there is a satisfactory explanation and some reason to believe that the probability of recurrence is low.

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:

- **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**

CARDIOVASCULAR SYSTEMS

Relative Risk Conditions

The diagnoses listed below potentially render the diver unable to meet the exertional performance requirements likely to be encountered in recreational diving. These conditions may lead the diver to experience cardiac ischemia and its consequences. Formalized stress testing is encouraged if there is any doubt regarding physical performance capability. The suggested minimum criteria for stress testing in such cases is at least 13 METS.* Failure to meet the exercise criteria would be of significant concern. Conditioning and retesting may make later qualification possible. Immersion in water causes a redistribution of blood from the periphery into the central compartment, an effect that is greatest in cold water. The marked increase in cardiac preload during immersion can precipitate pulmonary edema in patients with impaired left ventricular function or significant valvular disease. The effects of immersion can mostly be gauged by an assessment of the diver's performance while swimming on the surface. A large proportion of scuba diving deaths in North America are due to coronary artery disease. Before being approved to scuba dive, individuals older than 40 years are recommended to undergo risk assessment for coronary artery disease. Formal exercise testing may be needed to assess the risk.

* METS is a term used to describe the metabolic cost. The MET at rest is one, two METS is two times the resting level, three METS is three times the resting level, and so on. The resting energy cost (net oxygen requirement) is thus standardized. (Exercise Physiology; Clark, Prentice Hall, 1975.)

Relative Risk Conditions

- History of Coronary Artery Bypass Grafting (CABG)
- Percutaneous Balloon Angioplasty (PCTA) or Coronary Artery Disease (CAD)
- History of Myocardial Infarction
- Congestive Heart Failure
- Hypertension
- History of dysrhythmias requiring medication for suppression
- Valvular Regurgitation

Pacemakers

The pathologic process that necessitated should be addressed regarding the diver's fitness to dive. In those instances where the problem necessitating pacing does not preclude diving, will the diver be able to meet the performance criteria?

* NOTE: Pacemakers must be certified by the manufacturer as able to withstand the pressure changes involved in recreational diving.

Severe Risks

Venous emboli, commonly produced during decompression, may cross major intracardiac right-to-left shunts and enter the cerebral or spinal cord circulations causing neurological decompression illness. Hypertrophic cardiomyopathy and valvular stenosis may lead to the sudden onset of unconsciousness during exercise.

PULMONARY

Any process or lesion that impedes airflow from the lungs places the diver at risk for pulmonary overinflation with alveolar rupture and the possibility of cerebral air embolization. Many interstitial diseases predispose to spontaneous pneumothorax: Asthma (reactive airway disease), Chronic Obstructive Pulmonary Disease (COPD), cystic or cavitating lung diseases may all cause air trapping. The 1996 Undersea and Hyperbaric Medical Society (UHMS) consensus on diving and asthma indicates that for the risk of pulmonary barotrauma and decompression illness to be acceptably low, the asthmatic diver should be asymptomatic and have normal spirometry before and after an exercise test. Inhalation challenge tests (e.g.: using histamine, hypertonic saline or methacholine) are not sufficiently standardized to be interpreted in the context of scuba diving.

A pneumothorax that occurs or reoccurs while diving may be catastrophic. As the diver ascends, air trapped in the cavity 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. Structural disorders of the chest or abdominal wall (e.g.: prune belly), 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.

Relative Risk Conditions

- History of Asthma or Reactive Airway Disease (RAD)*
- History of Exercise Induced Bronchospasm (EIB)*
- History of solid, cystic or cavitating lesion*
- Pneumothorax secondary to:
 - Thoracic Surgery
 - Trauma or Pleural Penetration*
 - Previous Overinflation Injury*

- Obesity
- History of Immersion Pulmonary Edema Restrictive Disease*
- Interstitial lung disease: May increase the risk of pneumothorax

* Spirometry should be normal before and after exercise

Active Reactive Airway Disease, Active Asthma, Exercise Induced Bronchospasm, Chronic Obstructive Pulmonary Disease or history of same with abnormal PFTs or a positive exercise challenge are concerns for diving.

Severe Risk Conditions

- History of spontaneous pneumothorax. Individuals who have experienced spontaneous pneumothorax 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 (e.g.: pleurodesis, apical pleurectomy) or may not totally correct it (e.g.: resection of blebs or bullae).
- Impaired exercise performance due to respiratory disease.

GASTROINTESTINAL

Temporary Risks

As with other organ systems and disease states, a process which chronically debilitates the diver may impair exercise performance. Additionally, dive activities may take place in areas remote from medical care. The possibility of acute recurrences of disability or lethal symptoms must be considered.

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.

Relative Risk Conditions

- Inflammatory Bowel Disease
- Functional Bowel Disorders

Severe Risks

Altered anatomical relationships secondary to surgery or malformations that lead to gas trapping may cause serious problems. Gas trapped in a hollow viscous expands as the divers surfaces and can lead to rupture or, in the case of the upper GI tract, emesis. Emesis underwater may lead to drowning.

Severe Risk Conditions

- Gastric outlet obstruction of a degree sufficient to produce recurrent vomiting
- Chronic or recurrent small bowel obstruction
- Severe gastroesophageal reflux
- Achalasia
- Paraesophageal Hernia

ORTHOPAEDIC

Relative impairment of mobility, particularly in a boat or ashore with equipment weighing up to 18 kgs/40 pounds must be assessed. Orthopaedic conditions of a degree sufficient to impair exercise performance may increase the risk.

Relative Risk Conditions

- Amputation
- Scoliosis must also assess impact on respiratory function and exercise performance.
- Aseptic Necrosis possible risk of progression due to effects of decompression (evaluate the underlying medical

cause of decompression may accelerate/escalate the progression).

Temporary Risk Conditions

- Back pain

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 (e.g.: in hemophilia) may be difficult to distinguish from decompression illness.

Relative Risk Conditions

- Sickle Cell Disease
- Polycythemia Vera
- Leukemia
- Hemophilia/Impaired Coagulation

METABOLIC AND ENDOCRINOLOGICAL

With the exception of diabetes mellitus, 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.

Relative Risk Conditions

- Hormonal Excess or Deficiency
- Obesity
- Renal Insufficiency

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, unless associated with a specialized program that addresses these issues. [See "Guidelines for Recreational Diving with Diabetes" at www.wrsc.com and www.diversalertnetwork.org.]

Pregnancy: The effect of venous emboli formed during decompression on the fetus has not been thoroughly investigated. Diving is therefore not recommended during any stage of pregnancy or for women actively seeking to become pregnant.

BEHAVIORAL HEALTH

Behavioral: The diver's mental capacity and emotional make-up are important to safe diving. The student diver must have sufficient learning abilities to grasp information presented to him by his instructors, be able to safely plan and execute his own dives and react to changes around him in the underwater environment. The student's motivation to learn and his ability to deal with potentially dangerous situations are also crucial to safe scuba diving.

Relative Risk Conditions

- Developmental delay
- History of drug or alcohol abuse
- History of previous psychotic episodes
- Use of psychotropic medications

Severe Risk Conditions

- Inappropriate motivation to dive – solely to please spouse, partner or family member, to prove oneself in the face of

personal fears

- Claustrophobia and agoraphobia
- Active psychosis
- History of untreated panic disorder
- Drug or alcohol abuse

OTOLARYNGOLOGICAL

Equalisation 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 are at increased risk of rupture due to failure to equalise pressure or due to marked overpressurisation during vigorous or explosive Valsalva manoeuvres.

The larynx and pharynx must be free of an obstruction to airflow. The laryngeal and epiglottic structure must function normally to prevent aspiration.

Mandibular and maxillary function must be capable of allowing the patient to hold a scuba mouthpiece. Individuals who have had mid-face fractures may be prone to barotrauma and rupture of the air filled cavities involved.

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

Severe Risk Conditions

- Monomeric 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

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10. Undersea and Hyperbaric Medical Society (UHMS) www.UHMS.org
11. Divers Alert Network (DAN) United States, 6 West Colony Place, Durham, NC www.DiversAlertNetwork.org
12. Divers Alert Network Europe, P.O. Box 64026 Roseto, Italy, telephone non-emergency line: weekdays office hours +39-085-893-0333, emergency line 24 hours: +39-039-605-7858
13. Divers Alert Network S.E.A.P., P. O. Box 384, Ashburton, Australia, telephone 61-3-9886-9166
14. Divers Emergency Service, Australia, www.rah.sa.gov.au/hyperbaric, telephone 61-8-8212-9242
15. South Pacific Underwater Medicine Society (SPUMS), P.O. Box 190, Red Hill South, Victoria, Australia, www.spums.org.au
16. European Underwater and Baromedical Society, www.eubs.org

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