CONTINUING EDUCATION STUDENT DIVER MEDICAL DECLARATION

Please read carefully before signing.

This is a declaration in which you are informed of some potential risks involved in scuba diving and of the conduct required of you during the scuba diving training program. Your signature on this statement is required for you to participate in the training offered by **Pro Dive Cairns, 116 Spence Street, Cairns Qld 4870.**

Participant Medical Questionnaire (must be completed within 12 Months of course commencement)

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 designed for divers taking continuing education. For your safety, and that of others who may dive with you, answer all questions honestly.

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

Please answer the following questions on your past and present medical history by answering **YES** or **NO**. If you are not sure, answer **YES**. If any of these items apply to you, you must be assessed by a medical practitioner prior to participating in training. To undertake recreational diver training, the medical physician must issue you with a dive medical certificate that states that you are fit to undertake recreational diver training.

_____ 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 medication other than mefloquine/Lariam)

_____ Are you over 45 years of age AND can answer YES to one or more of the following questions?

- Currently smoke or inhale nicotine by other methods
- Have high cholesterol level
- Have high blood pressure
- Have had a close blood relative die suddenly of cardiac disease or stroke before the age of 50 , OR have a family history of heart disease before the age of 50(including abnormal heart rhythms, coronary artery disease or cardiomyopathy)

Have you ever had or do you currently have:

_____ Chest surgery, heart surgery, heart valve surgery, stent placement, or a pneumothorax (collapsed lung) and/or Chronic Lung disease?

_____ Asthma, wheezing, severe allergies, hay fever or congested airways within the last 12 months that limits physical activity/exercise?

_____ 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

_____ Recurrent bronchitis and currently coughing within the past 12 months, Or have been diagnosed with Emphysema?

_____ Symptoms affecting my lungs, heart and/or blood in the last 30 days that impair my physical or mental performance?

_____ Sinus surgery within the last 6 months?

_____ Ear disease or surgery, hearing loss or problems with balance?

_____ Recurrent sinusitis within the past 12 months?

_____ Eye surgery within the past 3 months?

_____ Head injury with loss of consciousness in the past five years?

_____ Persistent Neurologic injury or disease?

_____ Recurring migraine headaches within the past 12 months, or take medication to prevent them?

_____ Blackout or fainting (full or partial loss of consciousness within the last 5 years?

_____ Epilepsy, seizures, convulsions or take medications to prevent them?

_____ Behavioural health, mental or psychological problems requiring medical/psychiatric treatment?

_____ Major depression, suicidal ideation, panic attacks, uncontrolled bipolar requiring medication/psychiatric treatment?

_____ Been diagnosed with a mental health condition or a learning/developmental disorder that requires ongoing care?

_____ An addiction to drugs or alcohol requiring treatment in the last 5 years?

_____ Recurrent back problems in the last 6 months that limit my everyday activity?

_____ Back or spinal surgery in the last 12 months?

_____ Diabetes, drug or diet controlled, or gestational diabetes within the last 2 months?

_____ An uncorrected hernia that limits my physical activity?

_____ Active or un treated ulcers, problem wounds, or ulcer surgery within the last 6 months?

_____ Ostomy surgery and do not have medical clearance to swim or engage in physical activity?

_____ Dehydration requiring medical intervention in the last 7 days?

_____ Active or untreated stomach or intestinal ulcers or ulcer surgery within the last 6 months?

_____ Frequent heartburn, regurgitation, or gastroesophageal reflux disease (GERD)?

_____ Active uncontrolled ulcerative colitis or Crohns disease?

_____ Bariatric surgery within the last 12 months?

_____ I struggle to perform moderate exercise (for example, walk 1.6km in 14 min or swim 200M without resting) , Or I have been unable to participate in a normal physical activity due to fitness or health reasons in the past 12 months

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 Name	Birth Date	Age	Signature of participant	Date

_____	_____	_____	___/___/___
Name of Parent or Guardian (if applicable)	Signature	Relationship	Date

STUDENT

Please print legibly.

Name_____ Birth Date ___/___/_____ Age _____
First Initial Last dd/mm/yyyy

Mailing Address: _____

City_____ State/Province/Region _____

Country _____ Zip/Postal Code_____

Mobile Phone ( ) _____

Email _____

PHYSICIAN **(must be completed within 90 days of course commencement)**

The above-named person requests your opinion of their medical suitability to participate in recreational scuba diving or freediving training or activity. Please visit 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 (please circle one)

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.

_____ Date ____/____/_____
Physician's Signature dd/mm/yyyy

Physician:_____ Specialty:_____

Clinic/Hospital:_____

Address:_____

_____

Phone ( ) _____ Email _____

Physician/Clinic stamp

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 over inflation 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 039605 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 Cerebro-vascular 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 dysrythmias 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 Over inflation 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/wrstc.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 epiglotic 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 prosthedontic devices**
- **History of mid-face fracture**
- **Unhealed oral surgery sites**
- **History of head and/or neck therapeutic radiation**
- **History of temperomandibular 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**