



# CONTRAINDICATIONS IN FREEDIVING

## STATEMENT FROM THE MEDICAL AND SCIENCE COMMITTEE

### 1 PREAMBLE

This document outlines the current situation with the medical clearance of freedivers for training/education and competitions. In the past, two official documents for medical clearance existed in AIDA International (hereinafter “AIDA”): The AIDA Medical Statement/Form and the AIDA Medical Certificate. The AIDA Medical Statement/Form is provided for AIDA instructors and should be handed out to students before starting any AIDA education/training. This document is used for self-declaration of health status from students entering the AIDA course(s). It is a liability for the instructors (but may not be considered so from a legal point in many countries) and guidance on what conditions should be taken into consideration when deciding to begin freediving training. The AIDA Medical Statement will be converted into a list of contraindications and precautions for student information only. A signature on this document, declaring that the student has received the information about contraindications and precautions, will be part of the general liability.

At the same time, following international regulations on personal data protection, AIDA is considering stopping AIDA staff from dealing with personal medical data (AIDA Medical Statement). The reason for this is if an AIDA Instructor/competition organizer manages signed AIDA medical forms, they become a holder of personal data and must follow all data protection requirements. Therefore, the only option now is a medical certificate from the physician.

The AIDA guidelines for the physicians clearing the athletes and students for freediving training and competitions have been developed to familiarize athletes and students and to ensure appropriate medical examinations by a physician without a specialization in sports medicine.

The wording “AIDA Medical Certificate” presented in the AIDA “Competition Rules and Regulations” (hereinafter “the Rules”) has been removed from the Rules, as there has been some confusion and legal issues regarding this document.

### 2 TERMS

#### 2.1 RELATIVE CONTRAINDICATIONS

A person should be examined by a physician; a physician should decide about possibility to practice freediving.

#### 2.2 ABSOLUTE CONTRAINDICATIONS

A person shouldn't practice freediving (freediving courses and competitions).

## 3 CONTRAINDICATIONS TO FREEDIVING

Based on proposal of Dr. Juan M. Valdivia-Valdivia, MD (from 05.10.2020).

Summarised by Dr. Hanna Hakvoort, MD.

### 3.1 MEDICATIONS

#### 3.1.1 Relative Contraindications

- **Diuretics.** Daily diuretics may cause hypokalemia, important in relation heart function.
- **Opioids.** In high doses, depending on the individual, may suppress urge to breath and respiratory drive, affecting recovery breathing or freediving all together.
- **Benzodiazepines.** Same as above.
- **Antiepileptics (AED).** High frequency of seizures (one a month or more), or recent changes/taper/stop of AED, higher risk of seizures.

#### 3.1.2 Absolute Contraindications

- **Intrathecal-Baclofen/morphine pump.** Sustained high concentration of muscle relaxers or opioids on cerebrospinal fluid, concern for effect on respiratory drive, urge to breath.
- Current course of **chemotherapy for cancer**, any diagnosis.
- **Antipsychotics.** Unpredictability of behaviour on/under water.

### 3.2 MENTAL AND MOOD CONDITIONS

#### 3.2.1 Relative contraindications

- **Panic Disorder.** Frequent panic disorder can present with panic attack underwater.
- **Severe Post-traumatic stress disorder (PTSD).** Flashbacks may be triggered by water or confined spaces.
- **Tourette's syndrome.** Ticks can affect breath up, dive, recovery, depending on severity.

#### 3.2.2 Absolute contraindications

- **Dementia.** Freediver may be unable to understand safety measures/protocol.
- **Active schizophrenia with auditory/visual hallucinations.** Altered perception of present moment/ water sessions.
- **Severe Bipolar disorder (BPD).** Severe Mood swings can affect class environment/ water sessions, safety.

### 3.3 NEUROLOGICAL CONDITIONS

#### 3.3.1 Relative contraindications

- **Seizures.** If infrequent (once a year or less) and well managed with AEDs, may allow to take introductory freediving course with doctor's permission.
- **Aphasia Receptive/Expressive.** Depending on severity, student may be unable to understand commands, concepts or communicate distress on/underwater.

- **Cervical or thoracic spondylotic myelopathy.** Spinal cord compression that is severe and can be affected by neck movement such as flexion or extension may worsen cord compression during dives or after, may cause permanent deficits.

### 3.3.2 Absolute contraindications

- **Unsecured brain aneurysm over 5 mm size.** Risk of rupture increases over 5 mm size.
- **Brain aneurysm with prior rupture** and unsecured, any size.
- **Brain Arterio-venous malformation**, untreated, depending on location and size/ with prior ruptured and untreated.
- **Quadriparesis**, either metabolic or anatomical, from cervical spinal myelopathy.
- **Untreated seizures.**
- **Severe vertigo.**
- **Recent head trauma** with neurological implications (memory loss, vertigo).
- **Skull fractures** of any kind of degree.

## 3.4 CARDIOVASCULAR

### 3.4.1 Relative contraindications

- **Heart murmur.** May need cardiologist clearance, depending on severity.
- **Severe hypertension**
- **Uncontrolled tachycardia** (100 BPM or above)
- **Uncontrolled arrhythmia.**
- **Brugada syndrome.**

### 3.4.2 Absolute contraindications

- **Heart failure** with dyspnea at rest or at mild exercise.
- **Atrial fibrillation.**
- **Severe bradycardia** (<40) with history of sudden syncope
- **Severe pulmonary hypertension.**
- **Severe right to left shunt.**

## 3.5 PULMONARY

### 3.5.1 Relative Contradictions

- **Chronic obstructive pulmonary disease (COPD)**, controlled.
- **Cystic fibrosis**, depending on class level and depth

### 3.5.2 Absolute Contraindications

- **Severe COPD** with dyspnea at rest.
- **Pneumothorax.**
- **History of spontaneous pneumothorax.**
- **Pleural effusion**, active.

- Tuberculosis, active (with productive sputum).
- Severe asthma.
- Any conditions that cause airway obstruction.
- Recent Severe Immersion Pulmonary Oedema.
- Recent Severe Lung Barotrauma.
- Recent Severe Airway Obstruction.

### 3.6 EAR, NOSE, THROAT

#### 3.6.1 Relative contradictions

- Recent sinusitis.
- Recent history of severe sinus bleeding.
- Recent sinus or ear or throat surgery.
- Recent nasal surgery.

#### 3.6.2 Absolute Contraindications

- Perforated tympanic membrane.
- Active cerebral-spine fluid leak from skull base defect.
- Severe vertigo from middle ear pathology.

### 3.7 EYE

#### 3.7.1 Relative contraindications

- Retinal detachment, active or chronic.
- Recent corneal abrasion.
- Glaucoma.

#### 3.7.2 Absolute contraindications

- Eye globe injury.
- Severe cornea abrasion/ ulcer.
- Active scleral bleeding/ recent mask squeeze.

### 3.8 DIABETES MELLITUS (DM)

#### 3.8.1 Relative contraindications

- Uncontrolled diabetes type 1.
- Insulin pump without proper monitoring/ control.

#### 3.8.2 Absolute contraindications

- Uncontrolled hypoglycemia.
- Recent diabetic ketoacidosis.
- Recent malfunctioning insulin pump.
- Recent DM coma.

- DM-related **non-healing ulcer/ open ulcer** on diabetic foot.

## 4 CONTRIBUTIONS

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