

UMB Dive Safety Manual
MEDICAL STANDARDS – Section 6

# Section 6.00 MEDICAL STANDARDS

## 6.10 Medical Requirements

### General

1. The University of Massachusetts Boston shall determine that divers have passed a current diving physical examination and have been declared by the examining physician to be fit to engage in diving activities as may be limited or restricted in the medical evaluation report.
2. All medical evaluations required by this standard shall be performed by, or under the direction of, a licensed physician of the applicant-diver’s choice, preferably one trained in diving/undersea medicine.
3. The diver should be free of any chronic disabling disease and any conditions contained in the list of conditions for which restrictions from diving are generally recommended. (Appendix 1)

## 6.20 Frequency of Medical Evaluations

#### Medical evaluations shall be completed:

1. Before a diver may begin diving, unless an equivalent initial medical evaluation has been given within the preceding 5 years (3 years if over the age of 40, 2 years if over the age of 60), the member organization has obtained the results of that examination, and those results have been reviewed and found satisfactory by the member organization.
2. Thereafter, at 5 year intervals up to age 40, every 3 years after the age of 40, and every 2 years after the age of 60.
3. Clearance to return to diving must be obtained from a physician following any major injury or illness, or any condition requiring hospital care or chronic medication. If the injury or illness is pressure related, then the clearance to return to diving must come from a physician trained in diving medicine.

## 6.30 Information Provided Examining Physician

The University of Massachusetts Boston shall provide a copy of the medical evaluation requirements of this standard to the examining physician. (Appendices 1, 2, and 3).

## 6.40 Content of Medical Evaluations

Medical examinations conducted initially and at the intervals specified in Section 6.10 shall consist of the following:

1. Applicant agreement for release of medical information to the Diving Safety Officer and the DCB (Appendix 2).
2. Medical history (Appendix 3).
3. Diving physical examination (Required tests listed below and in Appendix 2).

## 6.50 Conditions Which May Disqualify Candidates From Diving

(Adapted from Bove, 1998)

* Abnormalities of the tympanic membrane, such as perforation, presence of a monomeric membrane, or inability to auto inflate the middle ears.
* Hearing loss; Vertigo including Meniere’s Disease.
* Stapedectomy or middle ear reconstructive surgery.
* Recent ocular surgery.
* Psychiatric disorders including claustrophobia, suicidal ideation, psychosis, anxiety states, depression.
* Substance abuse, including alcohol.
* Episodic loss of consciousness.
* History of seizure.
* History of stroke or a fixed neurological deficit.
* Recurring neurologic disorders, including transient ischemic attacks.
* History of intracranial aneurysm, other vascular malformation or intracranial hemorrhage.
* History of neurological decompression illness with residual deficit.
* Head injury.
* Hematologic disorders including coagulopathies.
* Risk factors or evidence of coronary artery disease.
* Atrial septal defects.
* Significant valvular heart disease - isolated mitral valve prolapse is not disqualifying.
* Significant cardiac rhythm or conduction abnormalities.
* Implanted cardiac pacemakers and cardiac defibrillators (ICD).
* Inadequate exercise tolerance.
* Hypertension.
* History of pneumothorax.
* Asthma.
* Chronic pulmonary disease, including radiographic evidence of pulmonary blebs, bullae or cysts.
* Diabetes mellitus.
* Pregnancy.

## 6.60 Laboratory Requirements for Diving Medical Evaluation and Intervals

#### Initial examination under age 40:

1. Medical History
2. Complete Physical Exam, emphasis on neurological and otological components
3. Urinalysis
4. Any further tests deemed necessary by the physician

#### Periodic re-examination under age 40 (every 5 years):

1. Medical History
2. Complete Physical Exam, emphasis on neurological and otological components
3. Urinalysis
4. Any further tests deemed necessary by the physician

#### First exam over age 40:

1. Medical History
2. Complete Physical Exam, emphasis on neurological and otological components
3. Detailed assessment of coronary artery disease risk factors using Multiple-Risk-Factor Assessment1,2 (age, family history, lipid profile, blood pressure, diabetic screening, smoking history). Further cardiac screening may be indicated based on risk factor assessment.
4. Resting EKG
5. Chest X-ray
6. Urinalysis
7. Any further tests deemed necessary by the physician

#### Periodic re-examination over age 40 (every 3 years); over age 60 (every 2 years):

1. Medical History
2. Complete Physical Exam, emphasis on neurological and otological components
3. Detailed assessment of coronary artery disease risk factors using Multiple-Risk-Factor Assessment[[1]](#footnote-1) (age, family history, lipid profile, blood pressure, diabetic screening, smoking history). Further cardiac screening may be indicated based on risk factor assessment.
4. Resting EKG
5. Urinalysis
6. Any further tests deemed necessary by the physician

## 6.70 Physician’s Written Report

After any medical examination relating to the individual’s fitness to dive, the organizational member shall obtain a written report prepared by the examining physician that shall contain the examining physician’s opinion of the individual’s fitness to dive, including any recommended restrictions or limitations. This report will be reviewed by the DCB.

The organizational member shall make a copy of the physician’s written report available to the individual.

1. Grundy, R.J. et. al. 1999. Assessment of Cardiovascular Risk by Use of Multiple-Risk-Factor Assessment Equations. AHA/ACC Scientific Statement. <http://www.acc.org/clinical/consensus/risk/risk1999.pdf>

2 Bove, A.A. 2011. The cardiovascular system and diving risk. *Undersea and Hyperbaric Medicine* 38(4): 261-269. [↑](#footnote-ref-1)