

## MEDICAL EVALUATION OF FITNESS FOR SCUBA DIVING REPORT

\_\_\_\_\_  
Name of Applicant (Print or Type)

\_\_\_\_\_  
Date(Mo/Day/Year)

To The PHYSICIAN:

This person is an applicant for training or is presently certified to engage in diving with self-contained underwater breathing apparatus (scuba). This is an activity which puts unusual stress on the individual in several ways. Your opinion on the applicant's medical fitness is requested. Scuba diving requires heavy exertion. The diver must be free of cardiovascular and respiratory disease. An absolute requirement is the ability of the lungs, middle ear and sinuses to equalize pressure. Any condition that risks the loss of consciousness should disqualify the applicant.

**TESTS:** Please initial that the following tests were completed, and indicate recommendation below.

**Initial Examination**

- \_\_\_\_\_ Medical History
- \_\_\_\_\_ Complete Physical Exam with emphasis on neurological and otological components
- \_\_\_\_\_ Chest X-Ray
- \_\_\_\_\_ Spirometry
- \_\_\_\_\_ Hematocrit or Hemoglobin
- \_\_\_\_\_ Urinalysis
- \_\_\_\_\_ Any further tests deemed necessary by the physician

**Additional testing for first over age 40**

- \_\_\_\_\_ Resting EKG
- \_\_\_\_\_ Assessment of coronary artery disease using Multiple-Risk-Factor Assessment 1 (age, lipid profile, blood pressure, diabetic screening, smoker)

**Re-examination (Every 5 years under age 40, or first exam over age 40, every 3 years over age 40, every 2 years over age 60)**

- \_\_\_\_\_ Medical History
- \_\_\_\_\_ Complete Physical Exam, with emphasis on neurological and otological components
- \_\_\_\_\_ Hematocrit or Hemoglobin
- \_\_\_\_\_ Urinalysis
- \_\_\_\_\_ Any further tests deemed necessary by the physician.

**Additional testing for over age 40**

- \_\_\_\_\_ Resting EKG
- \_\_\_\_\_ Assessment of coronary artery disease using Multiple-Risk-Factor Assessment 1 (age, lipid profile, blood pressure, diabetic screening, smoker)

**Note: Exercise stress testing may be indicated based on risk factor assessment 2**

**RECOMMENDATION:**

APPROVAL. I find no medical condition(s) which I consider incompatible with diving.

RESTRICTED ACTIVITY APPROVAL. The applicant may dive in certain circumstances as described in REMARKS.

FURTHER TESTING REQUIRED. I have encountered a potential contraindication to diving. Additional medical tests must be performed before a final assessment can be made. See **REMARKS**.

REJECT. This applicant has medical condition(s) which, in my opinion, clearly would constitute unacceptable hazards to health and safety in diving.

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

2 Gibbons RJ, et al. ACC/AHA Guidelines for Exercise Testing. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Exercise Testing). Journal of the American College of Cardiology. 30:260-311, 1997. <http://www.acc.org/clinical/guidelines/exercise/exercise.pdf>

**REMARKS:**

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I have discussed the patient's medical condition(s) which would not seriously interfere with diving but which may seriously compromise subsequent health. The patient understands the nature of the hazards and the risks involved in diving with these defects.

\_\_\_\_\_  
Signature M.D. \_\_\_\_\_  
Date

\_\_\_\_\_  
Name (Print or Type)

\_\_\_\_\_  
Address

\_\_\_\_\_  
Telephone Number

My familiarity with applicant is:

- With this exam only
- Regular Physician for \_\_\_\_\_ years
- Other (describe) \_\_\_\_\_

My familiarity with diving medicine is(describe):  
\_\_\_\_\_  
\_\_\_\_\_

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**APPLICANT'S RELEASE OF MEDICAL INFORMATION FORM**

I authorize the release of this information and all medical information subsequently acquired in association with my diving to the Mote Marine Laboratory Diving Safety Officer and Diving Control Board or their designee at (place)

\_\_\_\_\_ on (date)\_\_\_\_\_.

Signature of Applicant \_\_\_\_\_

## DIVING MEDICAL EXAM OVERVIEW FOR THE EXAMINING PHYSICIAN

TO THE EXAMINING PHYSICIAN:

This person, \_\_\_\_\_, requires a medical examination to assess his/her fitness for certification as a Scientific Diver for Mote Marine Laboratory. His /her answers on the Diving Medical History Form (attached), may indicate potential health or safety risks as noted. Your evaluation is requested on the attached scuba Diving Fitness Medical Evaluation Report. If you have questions about diving medicine, you may wish to consult one of the references on the attached list or contact one of the physicians with expertise in diving medicine whose names and phone numbers appear on an attached list. Please contact the undersigned Diving Safety Officer if you have any questions or concerns about diving medicine or the Mote Marine Laboratory standards. Thank you for your assistance.

\_\_\_\_\_  
Diving Safety Officer

\_\_\_\_\_  
Date

Erich Bartels  
Printed Name

(305) 745-2729 x305  
Phone Number

Scuba and other modes of compressed-gas diving can be strenuous and hazardous. A special risk is present if the middle ear, sinuses or lung segments do not readily equalize air pressure changes. The most common cause of distress is eustachian insufficiency. Most fatalities involve deficiencies in prudence, judgment, emotional stability or physical fitness. Please consult the following list of conditions, which usually restrict candidates from diving.

(Adapted from Bove, 1998: 61 -63, bracketed numbers are pages in Bove)

### CONDITIONS WHICH MAY DISQUALIFY CANDIDATES FROM DIVING

1. Abnormalities of the tympanic membrane, such as perforation, presence of a monomeric membrane, or inability to autoinflate the middle ears. [5,7,8,9]
2. Vertigo including Meniere's Disease. [13]
3. Stapedectomy or middle ear reconstructive surgery. [11]
4. Recent ocular surgery. [15,18,19]
5. Psychiatric disorders including claustrophobia, suicidal ideation, psychosis, anxiety states, untreated depression. [20 - 23]
6. Substance abuse, including alcohol. [24-25]
7. Episodic loss of consciousness. [1, 26,27]
8. History of seizure. [27, 28]
9. History of stroke or a fixed neurological deficit. [29,30]
10. Recurring neurologic disorders, including transient ischemic attacks. [29,30]
11. History of intracranial aneurysm, other vascular malformation or intracranial hemorrhage. [31]
12. History of neurological decompression illness with residual deficit. [29,30]
13. Head injury with sequelae. [26, 27]
14. Hematologic disorders including coagulopathies. [41, 42]
15. Evidence of coronary artery disease or high risk for coronary artery disease. [33 - 35]
16. Atrial septal defects. [39]
17. Significant valvular heart disease - isolated mitral valve prolapse is not disqualifying. [38]
18. Significant cardiac rhythm or conduction abnormalities. [36 - 37]
19. Implanted cardiac pacemakers and cardiac defibrillators (ICD). [39, 40]
20. Inadequate exercise tolerance. [34]
21. Severe hypertension. [35]
22. History of spontaneous or traumatic pneumothorax. [45]
23. Asthma. [42 - 44]
24. Chronic pulmonary disease, including radiographic evidence of pulmonary blebs, bullae or cysts. [45,46]
25. Diabetes mellitus. [46 - 47]
26. Pregnancy. [56]

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

2 "Are Asthmatics Fit to Dive? " Elliott DH, ed. 1996 Undersea and Hyperbaric Medical Society, Kensington, MD.

### **SELECTED REFERENCES IN DIVING MEDICINE**

Most of these are available from Best Publishing Company, P.O. Box 30100, Flagstaff, AZ 86003-0100, the Divers Alert Network (DAN) or the Undersea and Hyperbaric Medical Association (UHMS), Bethesda, MD.

ACC/AHA Guidelines for Exercise Testing. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Exercise Testing). Gibbons RJ, et al. 1997. Journal of the American College of Cardiology. 30:260-311.  
<http://www.acc.org/clinical/guidelines/exercise/exercise.pdf>

Alert Diver Magazine; Articles on diving medicine  
<http://www.diversalertnetwork.org/medical/articles/index.asp>

"Are Asthmatics Fit to Dive? " Elliott DH, ed. 1996 Undersea and Hyperbaric Medical Society, Kensington, MD.

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

DIVING MEDICINE, Third Edition, 1997. A. Bove and J. Davis. W.B. Saunders Company, Philadelphia

DIVING AND SUBAQUATIC MEDICINE, Third Edition, 1994. C. Edmonds, C. Lowery and J. Pennefather. Butterworth-Heinemann Ltd. Oxford

MEDICAL EXAMINATION OF SPORT SCUBA DIVERS, 1998. Alfred Bove, M.D.,Ph.D. (ed.). Medical Seminars, Inc. San Antonio, TX

NOAA DIVING MANUAL, NOAA. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.

U.S. NAVY DIVING MANUAL. Superintendent of Documents, U.S. Government Printing Office, WASHINGTON, D.C.