

## Appendix 5: 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 the Cambrian Foundation Scientific Diving Program. His/her answers on the Diving Medical History Form (attached), do/do not 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 of a general nature about diving medicine, you may wish to consult one of the references on the attached list or contact one of the physicians with the Divers Alert Network (DAN), Duke Foundation Medical Center, Durham, NC 27710, (919)684-2948. please contact the undersigned Diving Officer if you have any questions or concerns about diving medicine or the Cambrian Foundation standards. Thank you for your assistance.

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

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
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 Davis 1986: 47-59, bracketed numbers are pages in Davis)

- A. Tympanic membrane perforation or aeration tube. [7]
- B. Inability to autoinflate the middle ears. [6-8]
- C. External ear exostoses or osteomas adequate to prevent external ear canal pressure equilibration. [4]
- D. Meniere's disease or other chronic vertiginous conditions, status post-surgery, such as subarachnoid endolymphatic shunt for Meniere's disease. [11]
- E. Stapedectomy and middle ear prosthesis. [9]
- F. Chronic mastoiditis or mastoid fistula. [5]
- G. Any oral or maxillofacial deformity that interferes with retention of the regular mouthpiece. [43]
- H. Corrected near visual acuity not adequate to see cylinder pressure gauge, watch, decompression tables, and compass underwater. Uncorrected visual acuity not adequate to see the diving buddy or locate the boat in case corrective lenses are lost underwater. [13]
- I. Radial keratotomy or other recent ocular surgery. [14]
- J. Claustrophobia of a degree to predispose to panic. [15-16]
- K. Suicidal ideation. [16]
- L. Significant anxiety states. [16]
- M. Psychosis. [18]
- N. Severe depression. [16]
- O. Manic states. [16]

- P. Alcoholism. [19-20]
- Q. Mood-altering drug use. [19-20]
- R. Improper motivation for diving. [16-18]
- S. Episodic loss of consciousness. [1, 22]
- T. History of seizure. History of seizure in early childhood must be evaluated individually. [21]
- U. Migraine. [20]
- V. History of cerebrovascular accident or transient ischemic attack. [23]
- W. History of spinal cord trauma with neurologic deficit - whether fully recovered or not. [23]
- X. Any degenerative or demyelinating CNS process. [25]
- Y. Brain tumor with or without surgery. [24]
- Z. Intracranial aneurysm or other vascular malformation. [24]
- AA. History of neurological decompression sickness with residual deficit. [23,24]
- AB. Head injury with sequelae. [21]
- AC. History of intracranial surgery. [24]
- AD. Sickle cell disease. [34]
- AE. Polycythemia or leukemia. [34]
- AF. Unexplained anemia. [34]
- AG. History of myocardial infarction. [28-30]
- AH. Angina or other evidence of coronary artery disease. [29]
- AI. Unrepaired cardiac septal defects. [33]
- AJ. Aortic stenosis or mitral stenosis. [32]
- AK. Complete heart block. [31]
- AL. Fixed second degree heart block. [31]
- AM. Exercise induced tachyarrhythmias. [31,32]
- AN. Wolf-Parkinson-White (WPW) Syndrome with paroxysmal atrial tachycardia or syncope. [31]
- AO. Fixed-rate pacemakers. [33]
- AP. Any drugs which inhibit the normal cardiovascular response to exercise. [31]
- AQ. Peripheral vascular disease, arterial or venous, severe enough to limit exercise tolerance. [33, 41]
- AR. Hypertension with end-organ finding - retinal, cardiac, renal or vascular. [30]
- AS. History of spontaneous pneumothorax. [36]
- AT. Bronchial asthma. History of childhood asthma requires special studies. [7, 35]
- AU. Exercise or cold air induced asthma. [36,37]
- AV. X-ray evidence of pulmonary blebs, bullae, or cysts. [36,37]
- AW. Chronic obstructive pulmonary disease. [37]
- AX. Insulin-dependent diabetes mellitus. Diet or oral medication-controlled diabetes mellitus if there is a history of hypoglycemic episodes. [38]
- AY. Any abdominal wall hernia with potential for gas-trapping until surgically corrected. [41]
- AZ. Paraesophageal or incarcerated sliding hiatal hernia. [39]
- BA. Sliding hiatal hernia if symptomatic due to reflux esophagitis. [39]
- BB. Pregnancy. [1, 45]
- BC. Osteonecrosis. A history with a high risk of dysbaric osteonecrosis.
- BD. Any condition requiring ingestion of the following medications: antihistamines, bronchodilators, steroids, barbiturates, phenytoin, mood-altering drugs, insulin.

Attachments: Medical Evaluation of Fitness for Scuba Diving  
 Diving Medical History Form  
 Selected References in Diving Medicine

## Appendix 6: Medical Evaluation of Fitness for Scuba Diving

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

\_\_\_\_\_  
Date

### 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.

### The Laboratory Requirements for this examination are:

- Chest X-ray
- Visual Acuity
- Color Blindness
- Stress Test (of the physician's discretion)
- Resting EKG
- Hearing Test
- CBC
- Urinalysis
- Pulmonary Function Study
- Any additional tests the physician considers necessary

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

### Remarks:

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.

**My familiarity with applicant is:**

With this exam only

Regular Physician for \_\_\_\_\_ years

Other (describe) \_\_\_\_\_

**My familiarity with diving medicine:**

Training in Hyperbaric Medicine

Contact with the Divers Alert Network (919)684-2948

Other (describe) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

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

\_\_\_\_\_  
Address

\_\_\_\_\_  
Medical School Graduated From

\_\_\_\_\_  
State License Number

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