APPENDIX 1
DIVING MEDICAL EXAM OVERVIEW FOR THE EXAMINING PHYSICIAN

TO THE EXAMINING PHYSICIAN:
This person, ________________, requires a medical examination to assess their fitness for certification as a Scientific Diver for North Carolina State University (NCSU). Their 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 Diving Safety Officer if you have any questions or concerns about diving medicine or the NCSU standards. Thank you for your assistance.

H. Larry Brown, NCSU Diving Safety Officer
Box 8111 eMail: larry_brown@ncsu.edu
NC State University Phone: 919-515-1893
Raleigh, NC 27695-8111 Fax: 919-515-6149

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 that usually restrict candidates from diving.
(Adapted from Bove, 1998: 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]
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]

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.

- 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.


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

[ ] Initial Examination

[ ] Re-examination

(Every 5 years under age 40,
first exam over age 40,
every 3 years over age 40,
every 2 years over age 60)

___ Medical History

___ Medical History

___ Complete Physical Exam with emphasis on neurological and otological components

___ Complete Physical Exam, with emphasis on neurological and otological components

___ Chest X-Ray

___ Hematocrit or Hemoglobin

___ Spirometry

___ Urinalysis

___ Hematocrit or Hemoglobin

___ Any further tests deemed necessary by the physician

___ Any further tests deemed necessary by the physician

Additional testing for first over age 40

___ Assessment of coronary artery disease using Multiple-Risk-Factor Assessment³

(disease, lipid profile, blood pressure, diabetic screening, smoker) Note: Exercise stress testing may be indicated based on risk factor assessment⁴

Additional testing for over age 40

___ Assessment of coronary artery disease using Multiple-Risk-Factor Assessment⁵

(disease, lipid profile, blood pressure, diabetic screening, smoker) Note: Exercise stress testing may be indicated based on risk factor assessment⁶

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RECOMMENDATION:

[ ] APPROVAL. I find no medical condition(s) that 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.

REMARKS:

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

PHYSICIAN’S STATEMENT:

I have evaluated the above-mentioned individual according to the American Academy of Underwater Sciences medical standards for scientific diving (Section 6.00), and find no conditions that may be disqualifying. I have discussed with the patient any medical condition(s) that would not disqualify him/her from diving but which may seriously compromise subsequent health. The patient understands the nature of the hazards and the risks involved in diving with these conditions.

___________________________________________________________ M.D. or D.O.
Date     Signature

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:

If you are interested in being included in NCSU’s list of Diving Physicians, please contact the NCSU Diving Safety Officer:

H. Larry Brown, NCSU Diving Safety Officer
Box 8111
NC State University
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eMail: larry_brown@ncsu.edu
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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 NCSU Diving Safety Officer and Diving Control Board or their designee on (date)__________________.
Signature of Applicant ____________________________________