NC State University Diving Safety Program

Diving Medical Exam Overview for the Examining Physician

TO THE EXAMINING PHYSICIAN:

This person, ____________________________, requires a medical examination to assess his/her fitness for authorization as a Scientific Diver for the NC State University. 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 Medical Evaluation Report. If you have questions about diving medicine you may wish to consult one of the references on the attached list. Please contact the undersigned NC State University Diving Safety Officer if you have any questions or concerns about diving medicine or the NC State University Diving Safety Program standards. Thank you for your assistance.

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SCUBA and other modes of compressed-gas diving can be strenuous and hazardous. A special risk is present if the middle ear, sinuses, or lungs 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 usual restrict candidates from diving:

(Adapted from Davis 1986:47-50, bracketed numbers are pages in Davis)

1. Tympanic membrane perforation or aeration tube [7]
2. Inability to auto inflate the middle ears [6,7,8]
3. External ear exostoses or osteomas adequate to prevent external ear canal pressure equilibration [4]
4. Meniere’s Disease or other chronic vertiginous conditions, status post-surgery, such as subarachnoid endolymphatic shunt for Meniere’s Disease [11]
5. Stapedectomy and middle ear prostheses [9]
6. Chronic mastoiditis or mastoid fistula [5]
7. Any maxillofacial deformity that interferes with the retention of the regulator mouth piece [43]
8. Corrected near visual acuity not adequate to see tank 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]
9. Radial keratotomy or other recent ocular surgery [14]
10. Claustrophobia of a degree to predispose to panic [15, 16]
11. Suicidal ideation [16]
12. Significant anxiety states [16]
13. Psychosis [18]
14. Severe depression [16]
15. Manic states [16]
16. Alcoholism [19, 20]
17. Mood-altering drug use [19, 20]
18. Improper motivation for diving [16, 17, 18]
19. Episodic loss of consciousness [1, 22]
22. History of cerebrovascular accident or transient ischemic attack [23]
23. History of spinal cord trauma with neurologic deficit - whether fully recovered or not [23]
24. Any degenerative or demyelinating CNS process [25]
25. Brain tumor with or without surgery [24]
26. Intracranial aneurysm or other vascular malformation [24]
27. History of neurological decompression sickness with residual deficit [23, 24]
28. Head injury with sequelae [21]
30. Sickle Cell Disease [34]
31. Polycythemia or leukemia [34]
32. Unexplained anemia [34]
33. History of myocardial infarction [28, 29, 30]
34. Angina or other evidence of coronary artery disease [29]
35. Unrepaired cardiac septal defects [32]
36. Aortic stenosis or mitral stenosis [32]
37. Complete heart block [31]
38. Fixed second-degree heart block [31]
39. Exercise-induced tachyarrhythmias [31, 32]
40. Wolf-Parkinson-White (WPW) Syndrome with paroxysmal atrial tachycardis or syncope[31]
41. Fixed-rate pacemakers [33]
42. Any drugs that inhibit the normal cardiovascular response to exercise tolerance [31]
43. Peripheral vascular disease, arterial or venous, severe enough to limit exercise tolerance [33,41]
44. Hypertension with end-organ finding-retinal, cardiac, renal, or vascular [30]
45. History of spontaneous pneumothorax [36]
46. Bronchial asthma. History of childhood asthma requires special studies [7, 35]
47. Exercise or cold-induced asthma [36, 37]
48. X-ray evidence of pulmonary blebs, bullae, or cysts [36, 37]
49. Chronic obstructive pulmonary disease [37]
50. Insulin-dependent diabetes mellitus. Diet or oral medication-controlled diabetes if there is a history of hypoglycemic episodes. [38]
51. Any abdominal wall hernia with potential for gas-trapping until surgically corrected.
52. Paraesophageal or incarcerated sliding hiatal hernia [39]
53. Sliding hiatus hernia if symptomatic due to reflux esophagitis [39]
54. Pregnancy [1,45]
55. Osteonecrosis. A history consistent with a high risk of dysbaric osteonecrosis.
56. Any condition requiring ingestion of the following medication: antihistamines, broncodilators, steroids, barbiturates, phenytoin, mood-altering drugs, insulin.

Attachments: Medical Evaluation of Fitness for SCUBA Diving Report
Diving Medical History Form
Question evaluations for Diving Medical History Form
Recommended Physicians with Expertise in Diving/Undersea Medicine

References on Diving

SCUBA DIVING IN SAFETY AND HEALTH, C.W. Dueker. Madison Publishing Associates, Diving Safety Digest, P.O. Box 2735, Menlo Park, CA 94026.