**Boston Sea Rovers**

**Annual Summer Internship**

**DIVING MEDICAL EXAMINATION OVERVIEW**

**TO THE EXAMINING PHYSICIAN:**

This person is an applicant for training or is currently certified to engage in diving with underwater breathing apparatus (SCUBA or surface-supplied equipment). Your opinion of the applicant's physical fitness is requested. There are several areas of critical medical concern, which are cause for absolute disqualification from diving. These are:

**RESPIRATORY PROBLEMS:** obstructive lung disease may result in cerebral gas embolism or other lung overpressure injuries on ascent while breathing compressed air;

**CARDIOVASCULAR PROBLEMS:** particularly, those aggravated by *heavy exertion* and *immersion in cold water*; divers must have good exercise tolerance;

**IMPAIRMENT OF CONSCIOUSNESS:** even momentary *impairment of consciousness* underwater may result in death;

**BODY AIR SPACES:** diving involves significant changes in ambient pressure and gas volume. All body spaces, especially the lungs, middle ears, and sinuses must *equalize pressure* readily;

Responsibility to other divers is a consideration. Even if a diver were willing to take a calculated risk with his own safety, other divers would be at risk in attempting rescue if an accident occurred. In addition, evidence of neurotic trends, recklessness, accident proneness, panicky behavior, or questionable motivation should be evaluated.

Please consult the following list for conditions, which usually restrict candidates from diving (adapted from Davis 1986:47-49).

1. Tympanic membrane perforation or aeration tube

2. Inability to auto-inflate the middle ears

3. External ear exostoses or osteomas adequate to prevent external ear canal pressure equilibration

4. Meniere's Disease or other chronic vertiginous conditions, status post surgery, such as subarachnoid endolymphatic shunt for Meniere's Disease

5. Stapedectomy and middle ear prosthesis

6. Chronic mastoiditis or mastoid fistula

7. Any oral or maxillofacial deformity that interferes with the retention of the regulator mouthpiece

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

9. Radial keratotomy or other recent ocular surgery

10. Claustrophobia of a degree to predispose to panic

11. Suicidal ideation

12. Significant anxiety states

13. Psychosis

14. Severe depression

15. Manic states

16. Alcoholism

17. Mood-altering drug use

18. Improper motivation for diving

19. Episodic loss of consciousness

20. History of seizure. History of seizure in early childhood must be evaluated individually

21. Migraine

22. History of cerebrovascular accident or transient ischemic attack

23. History of spinal cord trauma with neurologic deficit - whether fully recovered or not.

24. Any degenerative or demyelinating CNS process

25. Brain tumor with or without surgery

26. Intracranial aneurysm or other vascular malformation

27. History of neurological decompression sickness with residual deficit

28. Head injury with sequelae

29. History of intracranial surgery

30. Sickle cell disease

31. Polycythemia or leukemia

32. Unexplained anemia

33. History of myocardial infarction

34. Angina or other evidence of coronary artery disease

35. Unrepaired cardiac septal defects

36. Aortic stenosis or mitral stenosis

37. Complete heart block

38. Fixed second-degree heart block

39. Exercised-induced tachyarrhythmias

40. Wolf-Parkinson-White (WPW) Syndrome with paroxysmal atrial tachycardia or syncope

41. Fixed-rate pacemakers

42. Any drugs which inhibit the normal cardiovascular response to exercise tolerance

43. Peripheral vascular disease, arterial or venous, severe enough to limit exercise tolerance

44. Hypertension with end-organ finding - retinal, cardiac, renal, or vascular

45. History of spontaneous pneumothorax

46. Bronchial asthma. History of childhood asthma requires special studies

47. Exercise or cold air-induced asthma

48. X-ray evidence of pulmonary blebs, bullae, or cysts

49. Chronic obstructive pulmonary disease

50. Insulin-dependent diabetes mellitus. Diet or oral medication-controlled diabetes mellitus if there is a history of hypoglycemic episodes

51. Any abdominal wall hernia with potential for gas-trapping until surgically corrected

52. Paraoesophageal or incarcerated sliding hiatal hernia

53. Sliding hiatus hernia if symptomatic due to reflux esophagitis

54. Pregnancy (temporary)

55. Osteonecrosis. A history consistent with a high risk of dysbaric osteonecrosis

56. Any condition requiring ingestion of the following medication: antihistamines, bronchodilators, steroids, barbiturates, phenytoin, mood-altering drugs, insulin

Divers are subject to injuries requiring antitetanus treatment. It is strongly advisable to maintain routine immunizations up-to-date.

If you feel the need for additional tests beyond those outlined in the attached form or for consultation, please contact the Boston Sea Rovers’ Internship Coordinator. It may be in the Sea Rovers' best interest to discontinue the person's participation in diving activities. For a more complete treatment of medical standards for diving, please refer to the attached list of reference materials.

**INSTRUCTIONS TO THE DIVER:**

Please carefully read the entire medical form, and then answer the questions on the Internship Diving Medical Questionnaire & Health History form before you report for your physical examination. Diving with certain medical conditions is dangerous, not only for you but for anyone coming to your aid if you get into difficulty in the water. It is therefore important that all information requested be provided as accurately as possible. ***This information will be kept confidential.*** If you have any questions, do not hesitate to ask your physician or the Internship Coordinator. Please sign and review for completeness the medical questionnaire and return it to the Internship Coordinator after your physical. It is recommended that you make a copy of this questionnaire and medical report for your files.

If your certification has expired, these forms/reports must be on file with the Boston Sea Rovers before you resume diving. Incomplete forms will be returned, and authorization to dive may be unnecessarily delayed.

**AS APPROPRIATE, THE MEDICAL EXAMINATION FOR THE BOSTON SEA ROVERS SUMMER INTERNSHIP SHOULD INCLUDE SOME OR ALL OF THE FOLLOWING PROCEDURES AND LABORATORY TESTS.**

**PLEASE CONTACT THE SEA ROVERS INTERNSHIP COORDINATOR IF YOU HAVE ANY QUESTIONS.**

|  |  |
| --- | --- |
| Required Tests for  Diving Physical Exam | Comments |
| Medical History and  Physical Exam | Include predisposition to unconsciousness, vomiting, cardiac arrest, impairment of oxygen transport, serious blood loss, or anything which will interfere with effective underwater work (see list above) |
| EKG | Standard 12-lead; required initially to establish baseline, and as medically indicated |
| Chest X-Ray | PA and lateral views |
| Visual Acuity |  |
| Color blindness |  |
| Audiogram | Threshold audiogram by pure tone audiometry; bone conduction and audiogram as medically indicated |
| Complete Blood Count | Hematocrit, hemoglobin, white blood cell count |
| Blood Chemistry |  |
| Complete Urinalysis |  |
| Pulmonary Function | Vital Capacity |

**RELEASE OF MEDICAL INFORMATION**

I authorize the release of this information and all medical information subsequently acquired in association with my diving to the Boston Sea Rovers Internship Committee.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature Date

Signature of Parent or Guardian if Applicant is a Minor, and by their signature they, on my behalf release all claims that both they and I have.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature Date

**Boston Sea Rovers**

**Annual Summer Internship**

**PHYSICIAN'S REPORT OF DIVING MEDICAL EXAMINATION Page 1**

**Applicant's Name:**

|  |  |  |  |
| --- | --- | --- | --- |
| **CLINICAL EVALUATION** | **NORMAL** | **ABNORMAL** | **RESULTS, COMMENTS**  **(Please be specific)** |
| Medical History and General Physical Condition |  |  | Please attach additional sheets as needed |
| Ears, Nose, and Throat |  |  |  |
| Chest X-Ray |  |  |  |
| Visual Acuity |  |  |  |
| EKG |  |  |  |
| Color Blindness |  |  |  |
| Audiogram |  |  | Please attach copy |
| Complete Blood Count and Blood Chemistry |  |  | Please attach copy |
| Complete Urinalysis |  |  |  |
| Pulmonary Function |  |  | Please attach copy |
| Other (as determined by the examining physician) |  |  | Please attach additional sheets as needed |

I have physically examined the applicant, and in keeping with the enclosed medical history, list of required tests, and list of contraindications to diving my findings are:

\_\_\_\_\_\_ **PHYSICALLY QUALIFIED:** I find no defects that I consider incompatible with diving.

\_\_\_\_\_\_ **RESTRICTED ACTIVITY:** The applicant may dive in certain circumstances as described below in Remarks.

\_\_\_\_\_\_ **FURTHER TESTING INDICATED:** I have encountered a potential contraindication to diving. Additional

medical tests must be performed before a final assessment can be made. See Remarks.

\_\_\_\_\_\_ **REJECTED:** This applicant has medical condition(s), which, in my opinion, would constitute unacceptable hazards to health and safety in diving. I have explained and discussed this with the applicant.

**PHYSICIAN'S REPORT OF DIVING MEDICAL EXAMINATION Page 2**

**Remarks:** Please explain any restrictions, rejections and any conditions that should be made known to any physician who may treat this person for a diving accident (include medical conditions, medication, allergies, etc.):

Physician's Name (print, type, or stamp) Telephone

Street Address, City/Town, State, and Zip Code

Physician's Signature Date (Mo/Day/Yr.)

**DIVING MEDICAL QUESTIONNAIRE & HEALTH HISTORY**

**TO THE DIVER**: Please carefully read the entire Medical Examination form, then answer the questions on this form before you report for your physical examination. Your answers to the questions are as important in determining your fitness to dive as what the physician may see, hear, or feel when you are examined. *This information will be kept confidential*. If you have any questions, do not hesitate to ask your physician or the Internship Coordinator.

|  |
| --- |
| **NAME AGE WGT HGT (IN)** |
| **ADDRESS PHONE** |

|  |  |  |  |
| --- | --- | --- | --- |
| **HAVE YOU EVER HAD/BEEN, OR DO YOU HAVE/ARE YOU NOW:** | **YES** | **NO** | **NOTES ON HISTORY** |
| 1. Epilepsy (seizures) |  |  |  |
| 2. Fainting or blackout spells |  |  |  |
| 3. Addicted to drugs |  |  |  |
| 4. Diabetes |  |  |  |
| 5. Motion sickness (cars, sea, air) |  |  |  |
| 6. Prone to claustrophobia |  |  |  |
| 7. A nervous breakdown |  |  |  |
| 8. Are you pregnant |  |  |  |
| 9. Menstrual problems |  |  |  |
| 10. Anxiety spells or hyperventilation |  |  |  |
| 11. Frequent sour stomach or vomiting |  |  |  |
| 12. A major operation |  |  |  |
| 13. Presently being treated by a physician |  |  |  |
| 14. Taking medication regularly |  |  |  |
| 15. Rejected or restricted from service, employment, or sports for medical reasons |  |  |  |
| 16. Frequent and severe headaches |  |  |  |
| 17. Dental plates |  |  |  |
| 18. Glasses/contact lenses |  |  |  |
| 19. Any bleeding disorders |  |  |  |
| 20. Problems with alcoholism |  |  |  |
| 21. Any diving related problems |  |  |  |
| 22. Nervous tension or emotional problems |  |  |  |
| 23. Do you sometimes take tranquilizers |  |  |  |

**DIVING MEDICAL QUESTIONNAIRE & HEALTH HISTORY PAGE 2**

|  |  |  |  |
| --- | --- | --- | --- |
| **HAVE YOU EVER HAD/BEEN, OR DO YOU HAVE/ARE YOU NOW:** | **YES** | **NO** | **NOTES ON HISTORY** |
| 24. Perforated eardrums |  |  |  |
| 25. Hay fever |  |  |  |
| 26. Frequent sinus trouble, frequent drainage from the nose, post-nasal drip, or stuffy nose |  |  |  |
| 27. Frequent earaches |  |  |  |
| 28. Drainage from the ears |  |  |  |
| 29. Difficulty with equalization of your ears in airplanes or on mountains |  |  |  |
| 30. Ear surgery |  |  |  |
| 31. Ringing in your ears |  |  |  |
| 32. Frequent dizzy spells |  |  |  |
| 33. Any hearing problems |  |  |  |
| 34. Trouble equalizing pressure in your ears |  |  |  |
| 35. Asthma |  |  |  |
| 36. Wheezing attacks |  |  |  |
| 37. Chronic or recurrent cough |  |  |  |
| 38. Frequently raised sputum |  |  |  |
| 39. Pleurisy |  |  |  |
| 40. Spontaneous pneumothorax |  |  |  |
| 41. Lung cysts |  |  |  |
| 42. Pneumonia |  |  |  |
| 43. Tuberculosis |  |  |  |
| 44. Do you often become shorter of breath than most people |  |  |  |
| 45. Told that you have a lung problem or abnormality |  |  |  |
| 46. Spit blood |  |  |  |
| 47. Breathing difficulty after eating particular foods or after exposure to particular pollens or animals |  |  |  |
| 48. Subject to bronchitis |  |  |  |
| 49. Subcutaneous emphysema |  |  |  |
| 50. Air embolism after diving |  |  |  |

**DIVING MEDICAL QUESTIONNAIRE & HEALTH HISTORY PAGE 3**

|  |  |  |  |
| --- | --- | --- | --- |
| **HAVE YOU EVER HAD/BEEN, OR DO YOU HAVE/ARE YOU NOW:** | **YES** | **NO** | **NOTES ON HISTORY** |
| 51. Rheumatic fever |  |  |  |
| 52. Scarlet fever |  |  |  |
| 53. Told you have a heart murmur |  |  |  |
| 54. Told you have an enlarged heart |  |  |  |
| 55. High Blood pressure |  |  |  |
| 56. Angina (heart pains, pressure in the chest) |  |  |  |
| 57. A heart attack |  |  |  |
| 58. Low blood pressure |  |  |  |
| 59. Recurrent or persistent swelling of the lungs |  |  |  |
| 60. Pounding, rapid heartbeat or palpitations |  |  |  |
| 61. Dizziness or fainting spells |  |  |  |
| 62. Do you get fatigued or short of breath easily |  |  |  |
| 63. Abnormal electrocardiogram (EKG) |  |  |  |
| 64. Joint problems, dislocations, or arthritis |  |  |  |
| 65. Back trouble or back injuries |  |  |  |
| 66. A ruptured or slipped disc |  |  |  |
| 67. Do you have any limiting physical handicaps |  |  |  |
| 68. Do you suffer from muscle cramps |  |  |  |
| 69. Do you have varicose veins |  |  |  |
| 70. Have you had any amputations |  |  |  |
| 71. A head injury causing unconsciousness |  |  |  |
| 72. Experienced any paralysis |  |  |  |
| 73. An adverse reaction to serum, drug, or medication |  |  |  |
| 74. Do you smoke? How long/how much? |  |  |  |
| 75. Decompression sickness (bends) |  |  |  |
| 76. Ear or sinus squeeze while diving |  |  |  |
| 77. Oxygen toxicity under pressure |  |  |  |
| 78. Treated for a diving accident in a recompression chamber |  |  |  |

**DIVING MEDICAL QUESTIONNAIRE & HEALTH HISTORY PAGE 4**

|  |  |
| --- | --- |
| **HAVE YOU EVER HAD/BEEN, OR DO YOU HAVE/ARE YOU NOW:** | **NOTES ON HISTORY** |
| 79. List all medications you currently take and the frequency of use |  |
| 80. List any allergies or allergic reactions to medications |  |
| 81. List any surgery you have had within the last 2 years |  |
| 82. List any recent (1-year) physical injuries (sprains, broken bones, decompression sickness, etc.) |  |
| 83. List all recent (1 year) medical conditions that required physician’s care or hospitalization |  |
| 84. What do you do for exercise? How often? |  |
| 85. Please explain any “YES” answer, and any other medical or physical conditions, or specific information you feel pertinent |  |
| Date of last diving physical examination:  / /  Mo Day Year    Name of physician who performed the examination    Address    Phone Number |  |

I certify that the above information is true and complete to the best of my knowledge.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature Date

Signature of Parent or Guardian if Applicant is a Minor, and by their signature they, on my behalf release all claims that both they and I have.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature Date

**DIVING MEDICAL HISTORY QUESTIONS EVALUATION FORM - ANSWER SCREENING AID**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | A |  | 21 | B |  | 41 | A |  | 61 | B |
| 2 | B |  | 22 | B |  | 42 | B |  | 62 | B |
| 3 | B |  | 23 | B |  | 43 | B |  | 63 | B |
| 4 | B |  | 24 | C |  | 44 | B |  | 64 | B |
| 5 | C |  | 25 | B |  | 45 | B |  | 65 | B |
| 6 | B |  | 26 | B |  | 46 | B |  | 66 | B |
| 7 | B |  | 27 | B |  | 47 | B |  | 67 | B |
| 8 | A |  | 28 | B |  | 48 | B |  | 68 | B |
| 9 | B |  | 29 | B |  | 49 | B |  | 69 | B |
| 10 | B |  | 30 | B |  | 50 | B |  | 70 | B |
| 11 | B |  | 31 | B |  | 51 | B |  | 71 | B |
| 12 | B |  | 32 | B |  | 52 | B |  | 72 | B |
| 13 | B |  | 33 | B |  | 53 | B |  | 73 | C |
| 14 | B |  | 34 | C |  | 54 | B |  | 74 | C |
| 15 | B |  | 35 | B |  | 55 | B |  | 75 | B |
| 16 | B |  | 36 | B |  | 56 | B |  | 76 | B |
| 17 | C |  | 37 | B |  | 57 | A |  | 77 | B |
| 18 | B |  | 38 | B |  | 58 | B |  | 78 | B |
| 19 | B |  | 39 | B |  | 59 | B |  |  |  |
| 20 | B |  | 40 | B |  | 60 | B |  |  |  |

When a “Yes” answer is checked:

A - Absolute Contraindication to Diving

B - Relative Contraindication to Diving, Requires Careful Review by Physician

C - Of Interest, Not A Contraindication