# THE OCEAN CORPORATION

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# **MEMORANDUM**

**TO:** ALL REGISTERED STUDENTS

FROM: SCHOOL DIRECTOR

SUBJECT: MEDICAL EXAMINATIONS

Prior to attending The Ocean Corporation, all commercial underwater diving students must have a physical examination and provide us with a copy of the examination that has been fully completed and signed by their licensed medical doctor. Enclosed is a form for your use.

Please take <u>this form</u> to your doctor and have an examination and provide The Ocean Corporation with a copy of the examination signed by a <u>licensed medical doctor</u>.

If you have questions regarding this, call our admissions department at 1-800-321-0298.

# NOTE

This medical exam is not the complete Association of Diving Contractors (ADC) Medical exam, which could be required by your future employer, and does not assure your suitability for employment. You can download the complete ADC medical form by visiting ADC-INT.ORG, click on "Business Forms".

Page 1 of 05 Meddoc rev 08/17/2017

# ASSOCIATION OF DIVING CONTRACTORS ("ADC") MEDICAL STANDARDS RECOMMENDATIONS

#### INTRODUCTION

The following recommendations are set forth by the Association of Diving Contractors Safety and Medical Committee. Physicians desiring further information are directed to contact the ADC's office in Gretna, Louisiana at (504) 362-0074. The ADC's recommendations deal with specific aspects of the subject's physical fitness to dive and these standards are offered in what the ADC believed to be, in most cases, the minimum requirements. The use of these standards is intended to be tempered with the good judgment of the examining physician. Where the examining physician is in doubt about the medical fitness of the subject, he should seek further opinion/consultation and recommendations of an appropriate specialist in that field. Particular attention must be paid to past medical and diving history. In general, a high standard of physical and mental health is required for diving. Consequently, in addition to excluding major disqualifying medical conditions, the examining physicians should identify and give careful consideration to minor, chronic, recurring or temporary mental or physical illnesses which may distract the diver and cause him to ignore factors concerned with his own and others' safety. The standards, in general, apply to all divers. With the most stringent requirements applied to the entry level diving candidate, some consideration must be given to the subject's medical history, work history, age, and experience.

There is no minimum or maximum age limit, providing all the medical standards can be met. Serious consideration must be given to the need for all divers to have adequate reserves of pulmonary and cardiovascular fitness for use in an emergency. The lack of these reserves may possibly lead to the termination of a professional diving career. Examining physicians are encouraged to exercise considerable discretion to decide what ancillary tests are necessary in particular circumstances.

If any further clarification of the recommended standards is desired, please contact the ADC Safety and Medical Committee.

- Name Record.
- 2. Social Security Number Record.
- 3. Height No set limits.
- 4. Weight The weight limits listed in the maximum allowable weight chart should apply. If a diver exceeds these limits and the cognizant physician feels the increase is due to muscular build and physical fitness, a variance may be appropriate. A variance may be appropriate for diver who do not meet the weight limits, but are at 23% (for males) or 34% (for females) body fat or less as measured by impedance or hydrostatic fat testing. Furthermore, individuals who fall within these weight limits but who present an excess of fatty tissue shall be disqualified.

#### BODY FAT TABLE AND BODY FAT PERCENTAGES COMPARISON TABLE

Body Fat Percentages Comparison Table								
FatLevel Men (%) Women (%)								
Very Low	7-10	14-17						
Low	10-13	17-20						
Average	13-17	20-27						
High	17-25	27-31						
Very High	above 25	above31						

### MAXIMUM ALLOWABLE WEIGHT CHART

Maxim	um Allowable Weigl	nt Chart
Males Weight in Pounds	Height (inches)	Females Weight in Pounds
170	60	170
176	61	174
182	62	179
188	63	182
194	64	187
200	65	192
206	66	196
212	67	200
218	68	204
225	69	209
230	70	212
235	71	217
241	72	222
247	73	225
- 253	74	230
259	75	234
265	76	239
271	77	243
277	78	248
283	79	252
289	80	255

- 5. Temperature The diver shall be free of any infection/disease which would cause an abnormal temperature.
- 6. Blood Pressure Ideally, the resting blood pressure should not exceed 140/90 mm Hg. In cases of apparent hypertension, repeated daily blood pressure determinations should be made before a final decision.
- Pulse/Rhythm Persistent tachycardia, marked arrhythmia, except of the sinus type, or other significant disturbances of the heart or vascular system should be disqualifying.
- 8. Hygiene Should be good.
- 9. Nutrition Should be good.
- 10. Build Record.
- 11. Distant Vision Uncorrected 20/200 either, 20/70 both. No less than 20/100 vision in either eye.
- 12. Near Vision Uncorrected: J16.
- 13. Color Vision Record.
- 14. Field of Vision Should be normal with any discrepancies documented.
- 15. Contact Lenses Record if used.
- 16. Head, Face and Scalp The causes for rejection:
  - a) Deformities of the skull in the nature of depressions, exostoses, etc. of a degree which would prevent the individual from wearing required equipment.
  - b) Deformities of the skull of any degree, associated with evidence of disease of the brain, spinal cord or peripheral nerves.
  - c) Loss of congenital absence of the bony substance of the skull.

### NOTICE AND DISCLAIMER

Please be advised that the Medical History and Physical Examination Forms included in this packet that is to be completed by a licensed medical doctor of your choice, may not be sufficient for any future employment. The Ocean Corporation **DOES NOT** represent or warrant that successful completion of this medical evaluation will guarantee that you will not need another later evaluation or that you are fit for employment with any future employer.

# MEDICAL EVALUATION FOR COMMERCIAL DIVING

Commercial divers must have good, general health and be able to do strenuous work. With some important exceptions, most physical findings that allow someone to safely perform vigorous industrial work will be compatible with commercial diving.

The nature of underwater work is such that any cardiac, neurologic, metabolic, or other condition that can render the diver unconscious or incapacitated will be quite hazardous or fatal.

Diving requires working under changing ambient pressures and breathing different gas mixtures. Divers must be easily able to ventilate the lungs, sinus cavities, and middle ear spaces; and the eardrums must be intact and able to withstand pressure changes.

Any condition interfering with free ventilation of the lungs underwater (such as acute asthma) gives high potential for fatality or permanent neurological damage.

Commercial divers commonly work far offshore or in parts of the world where modern medical care is not readily available. There is a general requirement that divers not have any conditions requiring regular medication in order to function normally or maintain good health; exceptions may be made for minor, infrequent problems. Similarly, episodic conditions which may require medical attention or whose presentation could be confused with an emergency by non-physician personnel are usually disqualifying.

In general, any current illness or injury should be healed before starting dive training.

Divers work underwater, commonly in dark, close conditions that place demands on emotional stability and self-reliance; at other times, there may be long periods of inactivity in cramped, hot decompression chambers. They live for long periods in close quarters with other people. In general, people who tend to be anxious, insecure, or whose personalities cause friction with others might not be suited for this line of work.

Examples of common disqualifying conditions follow but all cannot be covered here. Many medical guidelines differ on matters of medical judgment and may be somewhat ambiguous; occasionally, situations occur which are not covered by any written standard. To see their exact wording, your examining physician can obtain a copy of the current medical guidelines in the Consensus Standards for Commercial Diving Operations from:

**Association of Diving Contractors** 3910 FM 1960 - Suite 230 Houston, Texas 77068 Tel: 281-893-8388

Four medical publications which contain instructive information are:

Diving Medicine (4<sup>th</sup> Ed.) - Bove (editor), W. B. Saunders, ISBE 0 7216 6056 8

The Physiology and Medicine of Diving (5<sup>th</sup> Ed.) - Bennett & Elliot (editors), W. B. Saunders ISBN 7020 1589 X

Diving and Subaquatic Medicine (4<sup>th</sup> Ed.)-Edmonds, Loway, Pennefather, Butterworth-Heineman, ISBN 07506 0259 7

(hardcover) 0 7506 2131 l (paperback)

Undersea Biomed Res 1984 - Hickey D. Outline of medical standards for divers - 407-430

- VISION Excellent vision is not needed; should have binocular vision, correctable to about 20/40. Glasses cannot be worn while diving, but soft and gas-permeable contact lenses are permitted. Color vision must be adequate to perform ordinary daily tasks. Subtle color vision defect noted only with Ishihara Plates (or similar) are unimportant.
- Hearing must be sufficient to allow working safely in an industrial setting. The cardrum must be intact and the ossicles must be capable E.N.T. of withstanding pressure changes transmitted by the eardrum. There must be normal vestibular function. There can be no acute or chronic ear infections. Paranasal sinuses must be well ventilated without obstruction or chronic infection.
- There must be good dental hygiene. There must be no oral or mandibular deformity that prevents securely holding a mouthpiece. ORAL -

#### CARDIOVASCULAR. -

Blood pressure must be normal without medication. Cardiac capacity must be sufficient for strenuous exertion. There can be no rhythm disorders predisposing to syncope or unconsciousness. With the exception of patent foramen ovale, cardiac defects allowing right-to-left shunts are disqualifying. Suspicious heart murmurs must be evaluated to rule out predisposition to significant arrhythmia or limited exercise capacity. Evidence of past or present coronary disease is virtually always disqualifying, as is any hemodynamically

important organic heart defect. Isolated right bundle branch block or first degree AV block are acceptable, if there is good exercise capacity and no evidence of underlying cardiac disease.

#### PULMONARY-

The lung x-ray should be free of interstitial pathology. There can be no chronic or recurrent pulmonary infections, even if controlled by medication. Lung capacity and ventilation, as measured by standard spirometry, should be normal, with FEVI/FVC ratio of at least 75%. Congenital and acquired defects which may restrict pulmonary function, cause air entrapment or affect the ventilation-perfusion shall be disqualifying for both initial training and continuation. In general chronic obstructive or restrictive pulmonary disease of any type shall be disqualifying. Chest trauma or surgery resulting in marked pulmonary scarring or loss of lung tissue is usually disqualifying; minor stab wounds, tube thoracostomies, and other events leaving minimal scarring are usually acceptable, if spirometry is normal. Blebs, bronchiectasis, bullae, or other conditions predisposing to air trapping are disqualifying. History of spontaneous pneumothorax is disqualifying.

#### NEUROLOGIC -

Seizure disorders are disqualifying or any condition which can result in loss of consciousness or fainting, even if well-controlled by medication (febrile convulsions in childhood are acceptable). In general, minor or ordinary cerebral concussions with brief disorientation and short memory deficit are acceptable. Severe closed head injuries with more than brief unconsciousness (20-30 minutes), prolonged amnesia, intracerebral injury or hematoma on CT scan, focal neurologic signs or need for hospital care (other than brief observation) are usually disqualifying. Skull fractures penetrating the dura or causing cerebral injury or history of previous brain surgery are disqualifying. Evacuation of extracerebral hematomas is commonly disqualifying, depending on other findings. Previous spinal cord trauma is almost always disqualifying. Peripheral nerve injuries may be acceptable if normal function is present, there is no objective muscle weakness, and only minor sensory abnormalities. Most employers will not hire divers subject to migraine syndromes, especially if there are visual, sensory, or motor disturbances, or somnolence.

#### MUSCULOSKETAL -

All possible injuries and conditions cannot be covered here. In general, any injury which has healed sufficiently to allow strenuous work and the use of common industrial hand and power tools is acceptable. Previous shoulder, lumbar, or knee procedures where the operating surgeon has approved return to unlimited duty are acceptable. There must be a capacity for heavy lifting, overhead work, work in confined spaces, and carrying loads up ladders and on uneven decks.

#### GASTROINTESTINAL -

Dysfunction or inflammatory GI problems causing recurrent illness or pain which could mimic abdominal emergencies are disqualifying; recurrent diarrhea is disqualifying. Current symptomatic problems such as gallstones or ulcers should be resolved or healed by surgery or medication. Permanent ostomies are not acceptable for offshore diving but may be for inshore work. Severe hemorrhoids with chronic bleeding are not acceptable.

### GENITOURINARY-

There must be normal renal and urinary function and no need for chronic medication. History of recurrent ureteral stones is commonly disqualifying.

#### METABOLIC-

In general, there should be no endocrine or other condition requiring chronic medication or predisposing to recurrent illness or loss of consciousness. Diabetes requiring medication is disqualifying but good control by diet only is usually acceptable. There can be no tendency for symptomatic hypoglycemia. Mild to moderate obesity is not disqualifying if a good cardiovascular fitness is present, but over 30% body fat is usually disqualifying, regardless of fitness. Thyroid replacement for simple hypothyroidism or following radioiodine therapy is acceptable.

<u>SKIN-</u> Chronic conditions that require regular or frequent medication, are prone to infection, or made worse by marked heat and humidity or by prolonged wearing of tight garments (diving suits) are disqualifying.

# PSYCHIATRIC/BEHAVIORAL -

There should be the ability to live in close quarters with others for long periods without interpersonal friction, and addiction, alcoholism, or substance abuse is absolutely disqualifying. Recovering persons with a long period of demonstrated sobriety can be acceptable; where there is doubt, additional time should be required. Need for tranquilizers, antidepressants, Ritalin, or other psychoactive medications is disqualifying, as is any clear psychiatric or personality disorder, or cognitive illness, even if well controlled.

Diving medical expertise is commonly based as much on experience as firm medical data. For conditions not covered by the above or for degrees of abnormality which may call for specific medical judgment, consultation should be sought with a physician of your choosing who is familiar with diving medicine.



# 2.4.3 ADCI MEDICAL HISTORY AND EXAMINATION FORMS

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# Association of Diving Contractors International MEDICAL HISTORY FORM

1. Last Name First Name Middle Name 2. Email Address						3. Date of Birth	4. Gender	5. Last 4 No. of S		
6. Address (Number, Street) 7. City						9. Zip Code	10. Area Code	– Phone Number		
() Farancia au	Contact Person – Relationship – Addre		1	( ) 12. Cell Phone	N					
11. Emergency	Contact Person - Relationship - Addre			( )	Number					
13. MEDICAL HISTORY: Have you ever had or been treated for (positive answers must be explained below										
Ne   Convulsions or Seizures   Cardiac Angiogram or ECH   Epilepsy   PFO Repair   PFO Repair   Concussion or Head Injury   High Blood Pressure   Asthma or Wheezing   Concussion or Head Injury   High Blood Pressure   Asthma or Wheezing   Coughing up Blood   Coughing up Blood   Coughing up Blood   Coughing up Blood   Severe Motion Sickness   Tuberculosis   Tuberculosis   Coughing up Blood   Pressure   Coughing up Blood   Chronic Cough   Pneumothorax   Color Vision Defect   Lung Disease or Surgery   Gallbladder Disease or Stomach Trouble or Ulcers   Eye Disease or Injury   Gallbladder Disease or Stomach Trouble or Ulcers   Eye Disease or Injury   Frequent Indigestion   Ear Disease or Injury   Frequent Indigestion   Ear Surgery   Jaundice   Liver Disease or Hepatitis   Perforated Eardrum   Liver Disease or Hepatitis   Crohn's Disease/Ulcerative   Airway Obstruction   Gas Pains   Crohn's Disease/Ulcerative   Chest Pain   Rupture or Hemia   Rupture or Hemia   Chest Pain   Rupture or Injury   Coughing   Cardiae Stent or Angioplasty   Spine Problems   Spine Problems					000000000000000000000000000000000000000	Shoulder Injur	ad Injury e Injury e Injury r "Trick Knee or Injuries s or Fractures s e or Weakne. Paralysis rs roid Disease e Cell or Oth Disease ns cer a //Depression// kdown Transmitted I	ss er Anxiety Disease		
	Cardiac Stent or Angioplasty  For Females ONLY		Spine Problems Herniated Disc of Painful Menses	r Sciatica	Ц !	Other Illness of Medical Cond		ny Other		
	Irregular Menses	<u> </u>	Pregnancy	2	Last Me	enstrual Period				
PLEASE EX	KPLAIN THE DETAILS OF	EACH ITEM C	HECKED YES							
14. LIST A	LL SURGERIES							YEAR		
15 LICTA	I HOSPITALIZATIONS						=	VEAD		
15, LIST A	LL HOSPITALIZATIONS							YEAR		
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16. LIST A	LL INJURIES							YEAR		
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17. LIST A	LL MEDICATIONS, PRESC	RIPTION OR C	OVER THE COU	NTER						
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Have you ever h that you have do	ad illnesses, injuries, or lost time accident ne?			Do you have any allergi stings, or marine life?		food, chemicals, drugs, ins				
has not been dor	dvised to have a surgical operation or me oe?	dical treatment that		Are you presently under and address on the next	r the care of a phy: page.	sician? Give physician's n	ame			
COMMENTS:	CONDIGENTS:									



9.	My Personal Physician is:	Name			
		Address			
		City, State			
		Phone Number			
0,	DIVING HISTORY Ho	w long have you been commercial diving?			
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	Maximum Depth Surface Air			_ 1	num Depth
	Maximum Depth Surface Mixed	Gas		₩ □   <u> </u>	
	Longest Bottom Time Air		Trimix Yes 🔲 1	'' <u>'</u>	um Duration (Days)
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			Vertigo (Dizziness)		
	Ear/Sinus Squeeze		Pneumothorax [		
	Ear Drum Rupture		Nitrogen Narcosis		
	Deafness		Loss of Consciousness	J	
4. )	fave you been involved in a divi	ng accident (decompression sickness or othe	rs) since your last physical examination	? □Yes □N	o
5. 1	Date of last physical examination	: Name of Physic	ian who performed your last exam		
I	or what company or organization	were you last examined?	Address of Physician		
			City, State		
6 1	Java von aver had one of the foll	lowing? If so, give approximate date:			
	Yes No	Give Date	Yes No	C	iive Date
	☐ ☐ Chest X-Ray		Pulmonary Function Studies		
	Longbone Series		☐ ☐ Audiogram		
	Back (Spine) X-Ray		☐ ☐ EKG		
	☐ ☐ MRI		Exercise (Stress) EKG		
27. F	hysician Remarks;				
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Date

Signature



# Association of Diving Contractors International PHYSICAL EXAMINATION FORM

Employer		Date		Date of Birth	lj.	Age			
1. Last Name		First Name		Middle Nam	•	2. Last	2. Last 4 No. of SSN or PASSPORT No.		
. Height (inches)	4. Weight	Weight (pounds) 5. Body Fat (%) (C				6. BMI	6. BMI (Optional)		
. Temperature	8. Blood Pre	ssure /	9. Pulse/Rhythm		10. General Appearance	/Hygiene	11. Build		
2. Distant Vision:			Near Vision: Jacger		Near Vision Corrected	14. Color \	ision (Test Performed and Results)		
20/ , 20/	Corr. to 20/		20/	R. 2 L. 2					
		L °				l M-			
5. Field of Vision (Degrees) NORMAL ABNORM		in appropriate column (ent		ontact Lenses  f) RE	Yes _	No			
	17. Head, Fa	ce, Scalp							
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	32. Hernia (/ 33. Endocrin								
	34. G-U Syst								
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	37. Feet 38. Spine								
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	40. Anus and								
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