

PHYSICAL EVALUATION GUIDELINES FOR MERCHANT MARINER'S DOCUMENTS AND LICENSES (NVIC 2-98)

For a vessel to be operated safely, it is essential that the crewmembers be physically fit and free of debilitating illness and injury. The seafaring life is arduous, often hazardous, and the availability of medical assistance or treatment is generally minimal. As the international trend toward smaller crews continues, the ability of each crewmember to perform his or her routine duties and respond to emergencies becomes even more critical.

All mariners should be capable of living and working in cramped spaces, frequently in adverse weather causing violent motion of the vessel. Extended workdays are common. All mariners must be able to participate in emergency evolutions such as firefighting or launching lifeboats or liferafts. Members of the deck department must be capable of physical labor, climbing, and handling moderate weights (from 30-60 pounds).

These guidelines are to be used by physicians, physician assistants, and licensed nurse practitioners, in examining merchant seamen. It will also assist Coast Guard licensing personnel in evaluating an applicant's eligibility based on the findings.

These guidelines are just that—guidelines. They are not intended to be absolute or all encompassing. Some individuals may have other medical conditions or physical limitations which would render them incompetent to perform their duties aboard a vessel. Others may be quite capable of working at sea without posing a risk to themselves, their ship, or shipmates even though one of the listed conditions exists. Any cause for rejection is disqualifying only while the condition persists or is likely to cause disqualifying complications.

While each applicant must be evaluated for their physical competence individually, the conditions described in this article are those which have been considered disqualifying by the medical and maritime communities.

Waivers may be considered where extenuating circumstances are such to warrant special consideration and it can be demonstrated that the applicant can perform safely the duties of the license or merchant mariner document. Requests for waivers will be submitted to the National Maritime Center (NMC-4C) by the REC for review and a final determination.

The guidelines apply to all merchant marine physical examinations and should be provided to medical personnel for use in conjunction with the physical examination form (CG-719K or equivalent).

POTENTIALLY DISQUALIFYING CONDITIONS

The physical standards in this enclosure apply to an applicant for an original license as a deck officer, engineer officer, or pilot. The same standards apply to the upgrade or renewal of these licenses unless specifically noted.

EYES VISUAL ACUITY

The applicant must have vision correctable to 20/40 in each eye.

In all cases, the uncorrected vision should be at least 20/800. A vision waiver may be granted if the applicant's corrected vision in the better eye is at least 20/40.

Waivers will not be granted where any disease or condition exists that would cause progressive or degenerative visual acuity beyond the standards for a waiver.

The applicant must have 100 degrees horizontal field of vision.

All applicants with diabetes must submit documentation from their doctor that the diabetes is not affecting their eye sight.

Applicants who are completely sightless in one eye can also be approved to receive a Deck License if they can document that their depth perception and peripheral vision are not adversely affected by their condition.

COLOR VISION

The applicant must have the ability to recognize basic colors in order to recognize color-coded indicator lights, diagrams, piping systems, valves and wiring. Deck officers must also be able to recognize colored lights that are used on aids to navigation, such as navigation lights on vessels.

Satisfactory completion of any of the following methods is acceptable proof of color sense:

- Pseudoisochromtic Plates (Dvorine, 2nd Edition: AOC: revised edition or AOC-HRR; Ishihara 16-, 24-, or 38 plate editions)
- Eldridge Green Color Perception Lantern
- Farnsworth Lantern
- Keystone Orthoscope
- Keystone Telebinocular
- SAMCTT (School of Aviation Medicine Color Threshold Tester)
- Titmus Optical Vision Tester
- Williams Lantern

MONOCULAR VISION

In the case of an applicant with loss of sight in one eye, medical information indicates that depth perception may be affected. The degree of loss or lack of depth perception varies among individuals. The degree of variability is affected by the length of time that the applicant has been sightless in the eye and by the applicant's ability to compensate. Applicants must be evaluated individually to determine that they adequately compensate for their lack of vision and that they can safely work in the maritime environment. Such applicants shall provide letters of recommendation from former employers or co-workers attesting to their ability to perform duties similar to the duties required by the license or document sought. In cases where an applicant is unable to provide such documentation, for example, where loss of sight has recently occurred, a waiver may be based on a thorough medical report from an ophthalmologist. This report must substantiate that the applicant has compensated for the loss of depth perception and peripheral vision. All cases involving monocular vision must be forwarded to the National Maritime Center (NMC-4C) for resolution.

Persons requiring the use of glasses or contact lens to perform duties will be required to have a spare pair conveniently available on board the ship. Any need to wear visual aids to meet the required standards will be recorded on each license or document issued.

HEARING

Hearing thresholds are checked at 500 Hertz, 1000 Hz, 2000 Hz and 3000 Hz. The frequency responses for each ear are averaged to give a measure of hearing ability.

ORIGINAL DECK OFFICER LICENSES: An average, unaided hearing threshold of 70 db or less for each ear and functional speech discrimination of at least 90% is acceptable.

RENEWAL OR RAISE OF GRADE: An average unaided hearing threshold of 70 db or less for each ear and/or functional speech discrimination of at least 80% at 55 db for each ear is acceptable.

DECK OFFICER: Hearing aids may be used by applicants to meet the auditory requirements for all renewal or raise of grade transactions. The aided threshold should be 40 db or less in each ear and functional speech discrimination should be at least 90% at 55 db in both ears. The unaided threshold should be 70 db or less in each ear and functional speech discrimination of at least 80% at 55 db, binaural.

Other conditions outside of the ones discussed may be considered for a waiver when recommended by the Officer in Charge Marine Inspection.

SPEECH

Severe speech impediment, such as lispings or stuttering that would impede communication in an emergency situation.

CARDIAC

History of multiple myocardial infarctions: Functional class II, III or IV (INYHA-New York Heart Association). Any cardiac surgery, such as cardiac pacemaker, implant, bypass requires further evaluation.

Heart irregularity: Irregularity sufficient to compromise cardiac function.

Hypertension: uncontrolled hypertension or hypertension controlled by medication requiring close monitoring.

ORIGINAL DECK OFFICER: Blood pressure higher than 150/90 (regardless of treatment with medication).

RENEWAL OR RAISE IN GRADE OF DECK OFFICER LICENSES: Blood pressure higher than 160/100 if under age 50, or 175/100 if over age 50 and on medication.

PULMONARY

Lung disease, including chronic or active asthma that incapacitate and require corticosteroids medication.

Tuberculosis or other active pulmonary disease.

GASTROINTESTINAL

Chronic/recurrent pancreatitis; Esophageal varices-one episode of gastrointestinal bleeding in past 6 months or 2 episodes in the past 2 years.

GENITOURINARY

Chronic renal failure

ORTHOPEDIC

Amputation, deformity, or arthritis resulting in impairment of motion or use of limbs or back.

Requests for waivers should include a report of a practical demonstration of mobility. The details of the test shall be determined by the OCMI using the Marine Safety Manual as a guide. The test should be conducted under conditions appropriate for the credential, route, and tonnage the applicant is applying for. Applicant should be able to respond adequately in emergency situations.

ENDOCRINE/METABOLICDIABETES MELLITUS

Insulin dependent diabetes or poorly controlled non-insulin dependent diabetes. All applicants with diabetes should submit documentation from their doctor that the diabetes is not affecting the applicant's eyesight. The applicant should provide thorough information from their physician, including a recent HgbA1c test. The test must be below 10.0 for waiver approval.

Addison's disease, Cushing's syndrome-Adrenal dysfunction hyperaldosteronism.

Obesity sufficient to impair ordinary activity or likely to prevent rapid response in emergency situation.

HEMATOLOGIC/ONCOLOGIC

Hemophilia

Leukemia

Malignancies - Untreatable, recurrent or currently undergoing treatment (chemotherapy, radiation).

NEUROLOGIC

Any convulsive disorder resulting in an altered state of consciousness regardless of control by medication requires further evaluation. Any condition which seriously limits balance or coordination (e.g. Parkinson's disease, chorea, Meniere's disease).

Chronic organic/traumatic brain syndrome

Neurosyphilis

Narcolepsy

Senility

Somnambulism

PSYCHIATRIC

Diagnosis of primary psychosis

Any condition requiring the use of psychotropic medication(s)

Suicidal behavior

Mental retardation

Drug addiction

Current or chronic alcohol abuse/alcohol dependence/alcoholism

ALLERGIES

Any severe allergy which would cause sudden incapacitation or be life-threatening

INFECTIOUS DISEASES

Any communicable disease in its communicable or chronic carrier state which would present a health hazard to other crewmembers or passengers during casual shipboard contact, including meningitis, encephalitis, poliomyelitis within one year prior to examination. Residual neurological defects that interfere with satisfactory performance.

MEDICATIONS

Anticoagulants (Warfarin, Coumadin)

Systemic corticosteroids

Psychotropic medications

Medication side effects-See MISCELLANEOUS below

HIV-AIDS (ACQUIRED IMMUNODEFICIENCY SYNDROME)

A disease of the human immune system that is caused by infection with HIV, which is commonly transmitted in blood and bodily secretions. This requires review by the National Maritime Center for the medications (and their side effects) presently prescribed, the applicants present condition and the stage of the disease.

MISCELLANEOUS

Any other disease, constitutional defect, medication (side effects), sleep disorders or therapy which would result in gradual deterioration of performance of duties, sudden incapacitation or otherwise compromise shipboard safety, including required response in an emergency situation. In order to speed up the waiver process, it is recommended that the waiver package include the following information for the review of the case:

DIABETES

Narrative from doctor on diabetes education
Recent test (HgbA1c) for long term control of diabetes

CARDIAC

Exercise stress test (a Thallium test may be requested for some cases) to determine condition of heart and reaction of heart and vascular system under emergency situations.

List of all medications and possible side effects

Narrative from doctor giving history of condition and prognosis of condition

VISION

Color vision must be checked by one of the acceptable tests.

Field of vision should show total for both eyes.

A normal reading would be 90 degrees for each eye for a total of 180 degrees.

In all cases, the waiver package should include a narrative from the examining physician describing the condition, the prognosis, any restrictions, and all medications prescribed.

For any potentially disqualifying medical or physical condition other than vision requirements, the REC will refer the issue to the National Maritime Center for further review.

If issuance of a credential is denied due to a determination that you are not physically or medically qualified, you will be informed in writing of the cause and advised of the right to appeal the decision.