

5. MAJOR CHANGES. Enclosures (1), (4), and (6) are being replaced with updated guidance. The changes clarify existing guidance rather than instituting new policies.
 - a. This Notice adds guidance to NVIC 04-08 by inserting a revised enclosure (1). Subsequent to the original issuance of NVIC 04-08 the Coast Guard engaged in a rule making to implement the 2010 amendments to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended (STCW); See 78 Federal Register 77796, December 24, 2013. As part of this rulemaking and consistent with the STCW, the Coast Guard will now issue separate medical certificates that document the mariner's medical qualifications. See Reference (b). Enclosure (1) has been revised to update the references to the new regulations.
 - b. Reference (c) published a proposed revision to enclosure (4) and requested public comments. Enclosure (4) is the medication policy and provides guidance for the evaluation of applicants who are taking various medications. Comments received in response to reference (c) were used to revise the proposed policy.
 - c. This Notice changes the guidance found in enclosure (6) to NVIC 04-08 concerning the medical review process. Subsequent to initial issuance of NVIC 04-08, the Coast Guard centralized the evaluation of merchant mariner credential applications at the NMC. This Commandant Change Notice updates the contents of enclosure (6) to reflect the centralization of at the Mariner Credentialing program (MCP) as well as the changes to the regulations. Enclosure (6) outlines the process used in reviewing applications for medical certificates from mariners who have a condition subject to further review in accordance with Enclosure (3) to NVIC 04-08.
6. IMPACT ASSESSMENT. There are no additional personnel resources, training, or funding requirements expected because of the policy clarifications in this Commandant Change Notice.
7. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS.
 - a. The development of this directive and the general policies contained within it have been thoroughly reviewed by the originating office and are categorically excluded under current USCG categorical exclusion (CE) #33 from further environmental analysis, in accordance with Section 2.B.2. and Figure 2-1 of the National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series).
 - b. This directive will not have any of the following: significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws or administrative determinations relating to the environment. All future specific actions resulting from the general policies in this NVIC must be individually evaluated for compliance with the National Environmental Policy Act (NEPA), Council on Environmental Policy NEPA regulations at 40 CFR Parts 1500-1508, DHS and Coast Guard NEPA policy, and compliance with all other environmental mandates.
8. DISTRIBUTION. No paper distribution will be made of this Commandant Change Notice. An electronic version will be located on the following web sites: <http://www.uscg.mil/nmc/>, and <http://www.uscg.mil/hq/cg5/nvic/nvic.asp>.

9. **PROCEDURE**. If maintaining a paper library, remove and replace the following sections of NVIC 04-08.

Remove

Insert

Remove pages 1-6, Enclosure (1)

Insert pages 1-5 of Enclosure (1) CH-2

Remove pages 1-3, Enclosure (4)

Insert pages 1-11 of Enclosure (4) CH-2

Remove pages 1-8, Enclosure (6)

Insert page 1 of Enclosure (6) CH-2

10. **RECORDS MANAGEMENT CONSIDERATIONS**. This Commandant Change Notice has been thoroughly reviewed during the directives clearance process, and it has been determined there are no further records scheduling requirements, in accordance with Federal Records Act, 44 U.S.C. 3101 et seq., NARA requirements, and Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). This policy does not have any significant or substantial change to existing records management requirements.
11. **FORMS/REPORTS**. The forms referenced in this Commandant Change Notice are available in USCG Electronic Forms on the Standard Workstation or on the Internet: <http://www.uscg.mil/nmc>; <http://www.uscg.mil/forms/>; CG Portal <https://cgportal2.uscg.mil/library/forms/SitePages/Home.aspx>; and Intranet at <http://cgweb.comdt.uscg.mil/CGForms>.
12. **REQUESTS FOR CHANGES**. All questions and requests for changes regarding implementation of this Commandant Change Notice should be directed to the Mariner Credentialing Program Policy Division (CG-CVC-4), at (202) 372-2357 or MMCPolicy@uscg.mil.



P. F. Thomas
Rear Admiral, U. S. Coast Guard
Assistant Commandant for Prevention Policy

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U.S. Department of
Homeland Security



United States
Coast Guard

Commandant
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COMDTNOTE 16700.4
NVIC 04-08
JUNE 7, 2013

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 04-08, CH-1

Subj: CH-1 TO MEDICAL AND PHYSICAL EVALUATION GUIDELINES FOR MERCHANT MARINER CREDENTIALS, NVIC 04-08, COMDTPUB 16700.4

- Ref:
- (a) Medical and Physical Evaluation Guidelines for Merchant Mariner Credentials, NVIC 04-08, COMDTPUB 16700.4
 - (b) Marine Safety Manual, Volume III, Marine Industry Personnel, COMDTINST M1000.8B
 - (c) 46 CFR 10.215(g)
 - (d) [77 Fed. Reg. 55174](#), September 7, 2012.
 - (e) [78 Fed. Reg. 17917](#), March 25, 2013

1. **PURPOSE.** This Notice publishes change one to reference (a), Medical and Physical Evaluation Guidelines for Merchant Mariner Credentials, NVIC 04-08, COMDTPUB 16700.4.
2. **ACTION.** The Commanding Officer, National Maritime Center, shall ensure medical personnel who conduct examinations of applicants for merchant mariner credentials and Coast Guard personnel who review applications for credentials evaluate applicants in accordance with the contents of this Notice. Internet release is authorized.
3. **DIRECTIVES AFFECTED.** Medical and Physical Evaluation Guidelines for Merchant Mariner Credentials, Navigation and Inspection Circular (NVIC) 04-08, COMDTPUB 16700.4 is changed in accordance with this Notice. The Marine Safety Manual (MSM) Volume III, reference (b) has not been updated since 1999 and it may contain some information that conflicts with the guidance in reference (a). Until the MSM is updated, guidance in reference (a) as amended by this Notice supersedes the MSM in any areas where they may conflict.

DISTRIBUTION – SDL No. 162

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NON-STANDARD DISTRIBUTION:

4. DISCUSSION.

- a. This Notice changes the guidance found in reference (a) concerning the evaluation of merchant mariner credential applicants seeking medical waivers under reference (c) for applicants with anti-tachycardia devices or implantable cardioverter defibrillators (ICD). This does not change the current guidance that ICDs are generally not waivable; however it provides a new enclosure that describes the criteria that must be met in order to be considered for a waiver for anti-tachycardia devices or ICDs. The current version of reference (a) refers applicants to the NMC for guidance. This Notice adds the established guidance to reference (a) in enclosure (7). Reference (d) requested public comment on this proposed policy. Discussion of the public comment received will be published separately in a Notice of Availability in the Federal Register.
- b. This notice changes the guidance found in reference (a) concerning the evaluation of merchant mariner credential applicants seeking medical waivers under reference (c) for applicants with a history of seizures or convulsive disorders. This change provides detailed guidance on granting waivers to mariners with seizures. The current version of reference (a) refers applicants to the NMC for guidance. This Notice adds the established guidance to reference (a) in enclosure (8). Reference (e) requested public comment on this proposed policy. Discussion of the public comment received will be published separately in a Notice of Availability to be published in the Federal Register.

5. PROCEDURES. No paper distribution of this Notice will be made. Electronic copies are available on the Coast Guard Directives System (CGDS) sites located at: Internet: <http://www.uscg.mil/directives/>; Intranet: <http://cgweb.comdt.uscg.mil/CGDirectives/Welcome.htm>, CG Portal: <http://cgportal.uscg.mil>. Remove and insert the following pages:

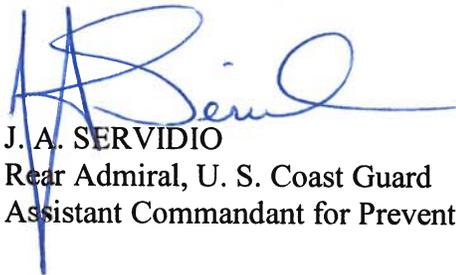
<u>Remove</u>	<u>Insert</u>
Remove page 5 of the NVIC	Insert page 5, CH-1
Remove page 16 of enclosure (3)	Insert page 16 CH-1 of enclosure (3)
Remove page 27 of enclosure (3)	Insert page 27 CH-1 of enclosure (3)
N/A	Insert pages 1-2 of new enclosure (7) CH-1
N/A	Insert pages 1-2 of new enclosure (8) CH-1

6. RECORD MANAGEMENT CONSIDERATIONS. This Notice has been thoroughly reviewed during the directives clearance process, and it has been determined there are no further records scheduling requirements, in accordance with Federal Records Act, 44 U.S.C. 3101 et seq., NARA requirements, and Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). This policy does not have any significant or substantial change to existing records management requirements.

7. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS.

- a. The development of this directive and the general policies contained within it have been thoroughly reviewed by the originating office in conjunction with the Office of Environmental Management, and are categorically excluded (CE) under current USCG CE # 1 from further environmental analysis, in accordance with Section 2.B.2 and Figure 2-1 of the National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series).
- b. This directive will not have any of the following: significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws or administrative determinations relating to the environment. All future specific actions resulting from the general policies in this directive must be individually evaluated for compliance with the National Environmental Policy Act (NEPA), DHS and Coast Guard NEPA policy, and compliance with all other environmental mandates.

8. FORMS/REPORTS. None.



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Assistant Commandant for Prevention Policy

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COMDTPUB 16700.4
NVIC 04-08
SEP 15 2008

NAVIGATION AND VESSEL INSPECTION NVIC NO. 04-08

Subj: MEDICAL AND PHYSICAL EVALUATION GUIDELINES FOR MERCHANT
MARINER CREDENTIALS

- Ref: (a) International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended (STCW)
(b) Title 46 United States Code, Subtitle II, Part E
(c) Title 46 Code of Federal Regulations (CFR) Chapter I, Subchapter B
(d) Title 46 CFR Parts 401 and 402

1. PURPOSE. This NVIC provides guidance for evaluating the physical and medical conditions of applicants for merchant mariner’s documents (MMDs), licenses, certificates of registry and STCW endorsements, collectively referred to as “credentials.” This NVIC also provides guidance for evaluating the physical and medical conditions of applicants for merchant mariner credentials (MMCs), if the Coast Guard begins issuing MMCs as supplementally proposed in 72 FR 3605 (January 25, 2007). The guidance in this NVIC should assist medical practitioners, the maritime industry, individual mariners and Coast Guard personnel in evaluating a mariner’s physical and medical status to meet the requirements of references (a) through (d). This guidance is not a substitute for applicable legal requirements.

- a. Coast Guard practices with respect to the physical and medical evaluation process have considerably evolved, consistent with developments and advancements in modern medical practices, since NVIC 2-98 was published in 1998. This NVIC replaces NVIC 2-98. This NVIC puts current Coast Guard practices into writing, making them transparent for all to see and promoting their consistent application.
- b. The guidance in this NVIC applies to applicants for original, renewal and raise in grade credentials. Enclosure (1) specifically details the standards that apply to applicants for each of the various types of credentials.

DISTRIBUTION – SDL No. 149

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A																										
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NAVIGATION AND VESSEL INSPECTION NVIC NO. 04-08

2. ACTION. Medical personnel who conduct examinations of applicants for credentials, and Coast Guard personnel who review applications for credentials should use the information in this NVIC to ensure a complete and appropriate physical exam is conducted.
3. DIRECTIVES AFFECTED. NVIC 2-98 and National Maritime Center (NMC) Policy Letters 11-98 and 4-99 are canceled. The Marine Safety Manual (MSM), Vol. III, Chapter 4, COMDTINST M16000.8 (series) has not been updated since 1999, and it may contain some information that conflicts with the guidance in this NVIC. Until the MSM is updated, the guidance in this NVIC supersedes the MSM in any areas where they may conflict.
4. BACKGROUND.
 - a. Reference (a) requires each country to establish standards of medical fitness for seafarers. Reference (a) applies to seagoing vessels, that is vessels which operate beyond the Boundary Line. It does not apply to inland mariners. References (b) and (c) require that mariners be physically able to perform their duties, using terms such as “general physical condition,” “good health” and “of sound health.” Reference (d) contains special requirements for registration as a Great Lakes Pilot, including the requirement to “pass a physical examination given by a licensed medical doctor.” None of these references contains specific standards, with the exception of visual acuity and color vision, for determining if mariners are physically and medically qualified.
 - b. Due to the lack of specificity in references (a) through (d), the physical and medical standards upon which credential applicants are evaluated and the medical tests and other information needed to make these evaluations may be unclear, leading to confusion and unnecessary delays. This lack of specificity may also lead to inconsistencies by medical practitioners conducting examinations of credential applicants, and ultimately by Coast Guard personnel determining whether credentials should be issued.
 - c. This NVIC details the specific medical conditions that may be subject to further review, and the recommended data for evaluation of each condition to determine fitness for service. It also details physical ability guidelines and acceptable vision and hearing standards. The specificity of this NVIC is necessary to reduce the subjectivity of the physical and medical evaluation process and promote more consistent evaluations. This NVIC will also reduce the time required to process credential applications by helping eliminate the uncertainty that mariners may currently encounter as to the specific physical and medical information needed to be submitted to process their applications.
 - d. The Coast Guard recognizes the need for qualified mariners and the potential shortage of mariners in the US and worldwide. This NVIC should not result in higher rates of disqualification for service, or in increased processing time for credential applications with physical and/or medical issues. To the contrary, the Coast Guard expects the process to be fairer and less subjective, and we anticipate application processing time to be reduced because all parties will know precisely what information is needed at the outset of the application process. The information contained in this NVIC places the historic and current practices in writing, making them transparent for all to see.

5. DISCUSSION.

- a. This NVIC is a resource to assist medical personnel in performing examinations of applicants. It provides guidance on conditions that are subject to further review for issuance of credentials and the recommended medical supplemental tests and evaluations. Medical practitioners should provide comments and recommendations with regard to the ability of applicants to meet the appropriate standards in references (a) through (d). The final determination regarding issuance of all credentials lies with the Coast Guard.
- b. Service on vessels may be arduous and impose unique physical and medical demands on mariners. The public safety risks associated with the medical and physical conditions of mariners on vessels are important considerations for the safe operation of vessels. In the event of an emergency, immediate response may be limited to the vessel's crew, and outside help may be delayed. Mariners must be medically and physically fit to perform their duties not only on a routine basis but also in an emergency.
- c. This NVIC has been developed by the Coast Guard in consultation with experienced maritime community medical practitioners and industry stakeholders. This NVIC reflects a synthesis of their recommendations, the requirements in references (a) through (d), and the recommendations of other federal transportation mode authorities as to appropriate physical and medical standards. The public was also afforded opportunity to comment on a draft of this NVIC. *See* 71 FR 56998 (September 28, 2006).
- d. Enclosure (1) provides medical certification standards as set forth in reference (c). Enclosure (1) lists the standards that apply to applicants for each of the various types of credentials.
- e. Enclosure (2) provides guidance for determining if mariners are physically able to perform their duties. For purposes of this NVIC, a medical condition is considered to cause “significant functional impairment” if it impairs the ability of the applicant to fully perform all of the physical abilities listed in this enclosure, or if it otherwise interferes with the ability of the applicant to fully perform the duties and responsibilities of the requested credential. Applicants with physical limitations who do not meet the related physical ability guidelines contained in enclosure (2) may be issued a credential with appropriate limitations as specified by the NMC.
- f. Enclosure (3) contains a non-exhaustive list of medical conditions subject to further review and supplemental medical data that should be submitted for such medical review. Not all of the medical conditions listed in enclosure (3) require a waiver. Applicants with these medical conditions may be issued credentials with or without limitations, waivers and/or other conditions of issuance as specified by the NMC. This is further discussed in enclosure (6).

(1) Enclosure (3)(a) contains an index of the medical conditions listed in enclosure (3).

(2) Enclosure (3)(b) contains a table of abbreviations used in enclosure (3).

- g. Enclosure (4) contains information about illegal substances and intoxicants, and a non-exhaustive list of medications that may be subject to further medical review in accordance with enclosure (6).
 - h. Enclosure (5) contains guidance for evaluating vision and hearing.
 - i. Enclosure (6) describes the medical review process.
 - j. Applicants for credentials should utilize form CG-719K or form CG-719K/E, as appropriate. Use of an equivalent form is acceptable if it includes the same information; however, an equivalent form should be submitted to the NMC for review prior to use. Submission of inadequate information will result in processing delays. Medical practitioners should review each page of the form. Forms and information about the medical review process are publicly available on the HOMEPORTR internet website at: <http://homeport.uscg.mil/mycg/portal/ep/browse.do?channelId=-25023>.
 - k. Some individuals may have conditions or limitations that are not listed which would render them incapable of performing their duties. Others with a listed condition or limitation may be quite capable of working at sea without posing a risk to the ship, their shipmates, or themselves. While each applicant is evaluated individually, the conditions described in this NVIC are those which may be subject to further review in accordance with enclosure (6) before a credential can be issued.
 - l. In situations where the applicant does not meet the standards specified in references (a) through (d), as supplemented by the guidance contained herein, waivers, limitations, and/or conditions of issuance may be considered by the NMC. The supplemental medical records, consultations, and test results listed in enclosure (3) should be submitted. *See* 46 CFR 10.205(d)(4) and enclosure (6).
 - m. Maritime academies should ensure that new entrants into a cadet program are physically and medically qualified. A cadet with a condition listed in enclosure (3) should be advised as early as possible that he or she may not be physically or medically eligible upon graduation to receive a credential. Medical staff at an academy may consult with the NMC. While a final determination cannot be made until an application is submitted prior to graduation, the NMC can advise that based on the cadet's present condition, a credential would probably (or probably not) be issued if he or she were applying for a credential at the present time.
 - n. Nothing in this NVIC precludes marine employers from establishing more rigorous medical or physical ability guidelines.
6. **DISCLAIMER.** This guidance is not a substitute for applicable legal requirements, nor is it itself a regulation. It is not intended to nor does it impose legally-binding requirements on any party. It represents the Coast Guard's current thinking on this topic and is issued for guidance purposes to outline methods of best practice for compliance with the applicable law. You may use an alternative approach if the approach satisfies the requirements of the

applicable statutes and regulations. If you wish to discuss alternative approaches (you are not required to do so), you may contact the NMC Medical Evaluations Branch, which is responsible for implementing this guidance. Contact information for the NMC Medical Evaluations Branch is listed in paragraph 8, below. This NVIC complies with Executive Order 13422 and associated OMB Bulletin on Agency Good Guidance Practices. *See* 72 FR 3432 (Jan 25, 2007).

7. CHANGES. This NVIC will be posted on the internet at: <http://www.uscg.mil/hq/g-m/nvic/index00.htm> or http://www.uscg.mil/nmc/policy_letters/nvic/pdfs/NVIC_4_08_with_enclosures.pdf

Changes will be issued as necessary. Suggestions for improvements should be submitted in writing to Commandant (CG-CVC-4) at the address specified in the header on the first page.

8. QUESTIONS. All questions regarding implementation of this NVIC should be directed to the NMC Medical Evaluations Branch at the following e-mail address: marinermedical@uscg.mil. The NMC can also be telephonically contacted at: 1-888-I-ASKNMC.
9. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS. Environmental considerations were examined in the development of this NVIC and have been determined to be not applicable.
10. FORMS/REPORTS. The forms called for in this Manual are available in USCG Electronic Forms on the Standard Workstation or on the Internet: <http://www.uscg.mil/forms/>, CG Central at <http://cgcentral.uscg.mil/>, and Intranet at <http://cgweb2.comdt.uscg.mil/CGFORMS/welcome.htm>

/s/

BRIAN M. SALERNO

Rear Admiral, U.S. Coast Guard

Assistant Commandant for Marine Safety, Security
& Stewardship

- Enclosures:
- (1) Medical Certification Standards
 - (2) Physical Ability Guidelines
 - (3) Medical Conditions Subject to Further Review
 - (3(a) Index
 - (3(b) Table of Abbreviations
 - (4) Medications
 - (5) Vision and Hearing Standards
 - (6) Medical Review Process
 - (7) Waivers for mariners with anti-tachycardia devices or implantable cardioverter defibrillators
 - (8) Waivers for mariners with a history of seizures

NAVIGATION AND VESSEL INSPECTION NVIC NO. 04-08

Non-Standard Distribution:

B:a CG-522(1); CG-543(1); CG-546(1); CG-541(1); CG-11(1); CGPC(1);

C:e New Orleans(20); New York(20); Boston(10); Baltimore(10); Charleston(10); Houston-Galveston(10); Miami(10); Memphis(10); Toledo(10); Long Beach(10); San Francisco Bay(10); Portland(10); Puget Sound(10); Honolulu (10); Juneau(5); Anchorage(5); St. Louis(5)

D:l Maritime Administration; Military Sealift Command; USMMA

E:i National Maritime Center

C:y South Portland (1); Boston (1); New Haven (1); Staten Island (1); Atlantic Beach, FL (1); Philadelphia (1); Baltimore (1); Portsmouth (1); Atlantic Beach, NC (1); St. Petersburg (1); Charleston (1); Miami Beach (1); San Juan (1); Key West (1); Metairie (1); Mobile (1); Houston (1); Corpus Christi (1); Memphis (1); Louisville (1); Buffalo (1); Detroit (1); Sault Ste. Marie (1); Milwaukee (1); San Diego (1); San Pedro (1); San Francisco (1); Seattle (1); North Bend (1); Portland (1); Honolulu (1); Guam (1)

E:r East Moriches (1); Atlantic City (1); Nags Head (1); Galveston (1); Grand Haven (1)

MEDICAL CERTIFICATION STANDARDS

This table lists the medical and physical requirements for mariner endorsements. It expands the content of Table 1 to 46 CFR 10.302(a) to provide further guidance to applicants. If an applicant applies for more than one credential at the same time, the most stringent of the requirements that apply to each credential will prevail.

Credential	Vision test	Hearing test	General medical exam	Demonstration of physical ability
(1) Deck officer, including pilots	Yes §10.305(a)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(2) Engineering officer	Yes §10.305(b)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(3) Radio officer	Yes §10.305(b)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(4) Offshore installation manager, barge supervisor, or ballast control operator	Yes §10.305(b)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(5) Able seaman	Yes §10.305(a)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(6) QMED	Yes §10.305(b)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(7) Able seafarer deck	Yes §10.305(a)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(8) RFPNW	Yes §10.305(a)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(9) Able seafarer engine	Yes §10.305(b)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(10) RFPEW	Yes §10.305(b)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(11) Electro-technical rating	Yes §10.305(b)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(12) Tankerman	Yes §10.305(b)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(13) Lifeboatman and Proficiency in survival craft and rescue boats other than fast rescue boats (PSC)	Yes §10.305(b)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(14) Lifeboatman-Limited and Proficiency in survival craft and rescue boats other than fast rescue boats—limited (PSC—limited)	Yes §10.305(b)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)

(15) Fast Rescue Boat	Yes §10.305(b)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(16) Food handler serving on vessels to which STCW does not apply	No	No	No. See Note 1	No
(17) Food handler serving on vessels to which STCW applies	No	No	No. See Note 1	Yes §10.304(c)
(18) Ratings, including entry level, serving on vessels to which STCW applies, other than those listed above. This includes endorsements as Vessel personnel with designated security duties and security awareness (VPDSD and SA).	No	No	No	Yes §10.304(c)
(19) Ratings, including entry level, serving on vessels to which STCW does not apply, other than those listed above. See Note 2.	No	No	No	No
(20) Vessel security officer	Yes §10.305(a)	Yes §10.306	Yes §10.304(a)	Yes §10.304(c)
(21) Staff Officers (46 CFR 10.301(c)) See Note 3.	No	No	No	No

NOTES:

1. Food Handlers:

a. Applicants for an endorsement as food handler are required to produce a statement from a licensed physician, physician assistant, or nurse practitioner stating that they are free from communicable disease. It may be documented in any verifiable format, including notes on the Application for Merchant Mariner Medical Certificate, Form CG-719K or Application for Merchant Mariner Medical Certificate for Entry Level Ratings, Form CG-719K/E or letterhead from the practitioner, certifying that the applicant is free from communicable disease. See 46 CFR 10.304(b).

b. Communicable disease is defined in 46 CFR 10.107(b) as “any disease capable of being transmitted from one person to another directly, by contact with excreta or other discharges from the body; or indirectly, via substances or inanimate objects contaminated with excreta or other discharges from an infected person.” The Department of Health and Human Services periodically publishes in the Federal Register a list of infectious and communicable diseases that are transmissible through the food supply, and that list provides examples of communicable diseases for purposes of 46 CFR 10.304.

2. Entry Level Ratings not on a vessel subject to STCW: Applicants holding only an entry-level endorsement need not meet the medical and physical requirements unless they are serving on a vessel subject to STCW. 46 CFR 10.301(a) and line 19 in Table 1 to 46 CFR 10.302(a). Therefore, no medical certificates will be issued to applicants holding only an entry-level endorsement without food handler endorsement.

3. Staff Officers: Applicants holding only a staff officer endorsement need not meet the medical and physical requirements. 46 CFR 10.301(c). Therefore, no medical certificates will be issued to applicants holding only a staff officer endorsement.

- A. ORIGINAL OFFICER AND QUALIFIED RATING ENDORSEMENTS. In accordance with 46 CFR 10.225(b)(7), every application for an original MMC must include proof (documented on the Application for Merchant Mariner Medical Certificate, Form CG-719K or Application for Merchant Mariner Medical Certificate for Entry Level Ratings, Form CG-719K/E as appropriate) that the applicant has passed all applicable vision, hearing, medical, and/or physical exams as required by 46 CFR 10.302(a) or has a valid medical certificate issued by the Coast Guard.
- B. RENEWAL OF OFFICER AND QUALIFIED RATING ENDORSEMENTS. In accordance with 46 CFR 10.227(d)(6), applicants seeking a national endorsement must either hold an unexpired medical certificate or submit a medical certificate application.
- C. RAISE OF GRADE OR NEW ENDORSEMENTS. Applicants seeking additional MMC endorsements holding a current medical certificate are not required to submit a new medical physical exam if their existing medical certification meets all of the requirements for the endorsement sought. 46 CFR 10.301(b)(4). Applicants without a medical certificate valid for the endorsement sought must submit an Application for Merchant Mariner Medical Certificate, Form CG-719K. 46 CFR 10.231(c)(8) and 46 CFR 11.201(a). Mariners holding only a national staff officer endorsement or those endorsements identified in line 19 of Table 1 to § 10.302(a) of this part or are exempt from this requirement.
- D. MARINERS' DUTIES. The duties and responsibilities that a mariner may perform can vary widely according to the credential. Mariners should be physically capable of performing all potential duties, both routine and emergency, associated with their credential(s). Enclosure (2) provides guidance on typical duties.
- E. SUPPLEMENTS AND MEDICATIONS. Supplements and over-the-counter (OTC) medications may interact with prescription drugs or cause hazardous side effects on their own. Medical practitioners should question applicants about their use of these substances. See paragraph 6 of enclosure (3) and parts D, G.8 and G.10 in enclosure (4)..
- F. SHORT-TERM CONDITIONS. Short-term conditions may render a mariner not physically or medically competent at the time of application, even though the condition is being appropriately treated and will be of relative short duration. An example of this would be a broken arm. The NMC will hold applications for a medical certificate open for no more than 90 days to allow the short term condition to resolve itself. If after 90 days the condition still persists the application will be denied and the applicant will be required to resubmit their application.
- G. MEDICAL EXAMS, TESTS AND DEMONSTRATIONS OF PHYSICAL ABILITY. All exams, tests and demonstrations must be performed, witnessed or reviewed by a physician, physician assistant, or nurse practitioner licensed by a state in the U.S., a U.S. possession, or a U.S. territory. Exams, tests and demonstrations performed, witnessed or reviewed by holders of foreign medical licenses and chiropractors or naturopathic doctors are not accepted under current regulations. All applicants who require a general medical exam must be physically examined. Examinations based solely on documentary review, and/or patient history review, are unacceptable. See Table 1 to 46 CFR 10.302(a) and 46 CFR 10.304. Individuals who

submit false information to the Coast Guard may be subject to criminal prosecution under 18 USC 1001.

H. FIRST CLASS PILOTS AND THOSE INDIVIDUALS “SERVING AS” PILOTS

1. Title 46 CFR 11.709 requires that every credentialed first class pilot serving as a pilot on a vessel of 1,600 GRT or more shall have a thorough physical examination each year, and that this physical examination must meet the same requirements for originally obtaining the medical certificate as specified in 46 CFR, part 10, subpart C and be recorded on an Application for Merchant Mariner Medical Certificate, Form CG-719K.
2. An individual's first-class pilot endorsement becomes invalid on the first day of the month following the anniversary of the individual's most recently completed Coast Guard-required physical examination. The individual may not operate under the authority of that endorsement until a physical examination has been satisfactorily completed.
3. Annual physicals are still required. Every other year, in accordance with the medical certificate requirements found in 46 CFR 11.709(b), the results of the physical examination must be recorded on an Application for Merchant Mariner Medical Certificate, Form CG-719K and submitted to the Coast Guard no later than 30 calendar days after completion of the physical examination.
4. For the purposes of 46 CFR 11.709(b) and (d), the Coast Guard considers the “individual’s most recently completed Coast Guard required physical examination” to be the same as the date of examination on the medical certificate. To reiterate, in the years the mariner must submit the results of the annual physical to the Coast Guard, the Coast Guard considers the date of examination to be the date that the Coast Guard approves the issuance of a medical certificate. It will not coincide with the date the medical practitioner signed the Application for Merchant Mariner Medical Certificate, Form CG-719K. (See NVIC 01-14.) In the years that the mariner is not required to submit their annual physical, the date of the most recently completed Coast Guard physical examination is the date the medical practitioner signs the Application for Merchant Mariner Medical Certificate, Form CG-719K.
5. Mariners are responsible for holding a valid medical certificate. Mariners must be aware of the expiration dates on their medical certificate and the applicability of the dates to their current employment. Renewals should be submitted in sufficient time so that the medical certificate does not lapse. Mariners should monitor the NMC website for information on processing time. Additionally, mariners with medical conditions should submit their applications early to allow adequate processing time.
6. 46 CFR 15.812 (b)(3)(iii) and (c)(3) require that other licensed individuals who “serve as” pilots on certain types of vessels must have a current physical examination in accordance with the provisions of 46 CFR 11.709. A physical examination meeting the guidelines in enclosures (2) through (5) satisfies these regulatory requirements.
7. First class pilots, and all other individuals who “serve as” pilots in accordance with 46 CFR 15.812(b)(3) and (c), should annually have a physical examination documented

on an Application for Merchant Mariner Medical Certificate, Form CG-719K. Biennially, this should be submitted to the Coast Guard no later than 30 calendar days after completion of the physical examination each year. The annual physical examination must, in accordance with 46 CFR 10.709(d), be completed by the first day of the month following the first anniversary of the individual's most recent satisfactorily completed physical examination.

8. The Coast Guard may initiate appropriate administrative action in the event any first class pilot - or any other individual "serving as" a pilot (as described above) - does not meet the physical examination requirements specified in 46 CFR 10.301, up to and including suspension or revocation of the mariner's credential in accordance with 46 CFR Part 5.
9. Individuals with endorsements as pilot, master or mate (and individuals applying for those credentials) who do not in fact serve as a first class pilot or otherwise "serve as" a pilot in accordance with 46 CFR 15.812(b)(3) and (c) are not required to have an annual physical examination.

I. GREAT LAKES REGISTERED PILOTS

1. The Director, Office of Great Lakes Pilotage at Coast Guard Headquarters (Director) has designated Application for Merchant Mariner Medical Certificate, Form CG-719K as the required form for physical examinations replacing the previous requirement to use page 3 of Application for Registration as United States Registered Pilot, Form CG-4509.
2. A Great Lakes Registered Pilot must be "physically competent to perform the duties of a U.S. Registered Pilot and meet the medical requirements prescribed by the Commandant." See 46 CFR 401.210(a)(4). The annual physical examination required by 46 CFR 402.210(a) must be reported "on the form furnished by the Director" and must be given by a "licensed medical doctor". A copy of the Application for Merchant Mariner Medical Certificate, Form CG-719K submitted annually to the Director will satisfy all original, renewal and annual physical reporting requirements of 46 CFR 401.210 and 402.210. Great Lakes Registered Pilots will be responsible for submitting the original Application for Merchant Mariner Medical Certificate, Form CG-719K to the NMC for issuance of a medical certificate.
3. The Director may suspend and/or revoke or refuse to register or renew a Great Lakes Registered Pilot's registration when that Pilot does not continuously meet the standards of this NVIC. See 46 CFR 401.210 and 46 CFR 401.240. Evidence obtained from any physical examination may be used by the Coast Guard to cancel a mariner's medical certificate.

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PHYSICAL ABILITY GUIDELINES

1. Credential applicants should be physically able to perform assigned shipboard functions and meet the physical demands that would reasonably arise during an emergency response. As used in this context, an “*emergency response*” refers to emergency evolutions such as abandon ship and firefighting, and the basic procedures to be followed by each mariner.
2. If the examining medical practitioner doubts the applicant’s ability to meet the guidelines contained within this table, and for all applicants with a Body Mass Index (BMI) of 40.0 or higher, the practitioner should require that the applicant demonstrate the ability to meet the guidelines. This does not mean, for example, that the applicant must actually don an exposure suit, pull an uncharged 1.5 inch diameter 50’ fire hose with nozzle to full extension, or lift a charged 1.5 inch diameter fire hose to fire fighting position. Rather, the medical practitioner may utilize alternative measures to satisfy himself or herself that the applicant possesses the ability to meet the guidelines in the third column. A description of the methods utilized by the medical practitioner should be reported on the CG-719K or CG-719K/E (or approved equivalent form) as appropriate. All demonstrations of ability should be performed by the applicant without assistance. Any prosthesis normally worn by the applicant and other aid devices such as prescription glasses may be used by the applicant in all practical demonstrations except when the use of such would prevent the proper wearing of mandated personal protective equipment (PPE).
 - a. Those applicants where only a physical demonstration of abilities is required (719-K/E) may substitute a physical exam (719-K) . Enclosure (1) details the relevant standards applicable to each type of credential.
 - b. The BMI calculation is discussed on the Centers for Disease Control and Prevention website:
http://www.cdc.gov/nccdphp/dnpa/bmi/adult_BMI/about_adult_BMI.htm
3. The Coast Guard recognizes that the guidelines contained in this table refer to shipboard conditions and tasks that may not be applicable to all vessels, e.g. a crewmember on a 79-foot towing or small passenger vessel may not be required to carry a 1.5 inch diameter fire hose with nozzle 50 feet; however, for the most part, credentials issued by the Coast Guard are not vessel specific, and they provide authority to work on different types and sizes of vessels, with each vessel having its own equipment and operating conditions. An applicant (along with his or her employer, as appropriate) who is unable to meet any of the guidelines contained within this table may propose alternatives that reflect the conditions applicable to his or her operating environment. Such proposals should be made in writing to the NMC, which will give full consideration to each proposal on an individual, case-by-case basis. *See* paragraph 10 of enclosure (6).

PHYSICAL ABILITY GUIDELINES

4. If an applicant is unable to meet any of the guidelines contained within this table, the examining medical practitioner should provide information on the degree or severity of the applicant's inability to meet the guidelines. Applicants with physical limitations who do not meet the related physical ability guidelines in this table may be issued a credential with appropriate limitations upon evaluation by the Coast Guard. Mariners and marine employers are responsible for restricting the mariner's duties to the limitations of the credential.
 - a. Any prosthesis or similar device used to successfully meet the physical standards should be noted on the credential(s), along with a requirement that the individual must use the prosthesis or similar device while acting under the authority of the credential(s).

PHYSICAL ABILITY GUIDELINES

SHIPBOARD TASKS, FUNCTION, EVENT OR CONDITION:	RELATED PHYSICAL ABILITY:	THE EXAMINER SHOULD BE SATISFIED THAT THE APPLICANT:
Routine movement on slippery, uneven and unstable surfaces.	Maintain balance (equilibrium).	Has no disturbance in sense of balance.
Routine access between levels.	Climb up and down vertical ladders and stairways.	Is able, without assistance, to climb up and down vertical ladders and stairways.
Routine movement between spaces and compartments.	Step over high door sills and coamings, and move through restricted accesses.	Is able, without assistance, to step over a door sill or coaming of 24 inches (61 centimeters) in height. Able to move through a restricted opening of 24 inches by 24 inches (61 centimeters by 61 centimeters).
Open and close watertight doors, hand cranking systems, open/close valve wheels.	Manipulate mechanical devices using manual and digital dexterity, and strength.	Is able, without assistance, to open and close watertight doors that may weigh up to 55 pounds (25 kilograms). Should be able to move hands/arms to open and close valve wheels in vertical and horizontal directions; rotate wrists to turn handles. Reach above shoulder height.

PHYSICAL ABILITY GUIDELINES

SHIPBOARD TASKS, FUNCTION, EVENT OR CONDITION:	RELATED PHYSICAL ABILITY:	THE EXAMINER SHOULD BE SATISFIED THAT THE APPLICANT:
Handle ship's stores.	Lift, pull, push and carry a load.	Is able, without assistance, to lift at least a 40 pound (18.1 kilogram) load off the ground, and to carry, push or pull the same load.
General vessel maintenance.	Crouch (lowering height by bending knees); kneel (placing knees on ground); and stoop (lowering height by bending at the waist). Use hand tools such as spanners, valve wrenches, hammers, screwdrivers, pliers.	Is able, without assistance, to grasp, lift and manipulate various common shipboard tools.
Emergency response procedures, including escape from smoke-filled spaces.	Crawl (the ability to move the body with hands and knees); feel (the ability to handle or touch to examine or determine differences in texture and temperature).	Is able, without assistance, to crouch, kneel and crawl, and to distinguish differences in texture and temperature by feel.
Stand a routine watch.	Stand a routine watch.	Is able, without assistance, to intermittently stand on feet for up to four hours with minimal rest periods.
React to visual alarms and instructions, emergency response procedures.	Distinguish an object or shape at a certain distance.	Fulfills the eyesight standards for the merchant mariner credential(s) applied for. <i>See footnote 1 of this table & enclosure (5) of this NVIC.</i>

PHYSICAL ABILITY GUIDELINES

SHIPBOARD TASKS, FUNCTION, EVENT OR CONDITION:	RELATED PHYSICAL ABILITY:	THE EXAMINER SHOULD BE SATISFIED THAT THE APPLICANT:
React to audible alarms and instructions, emergency response procedures.	Hear a specified decibel (dB) sound at a specified frequency.	Fulfills the hearing capacity standards for the merchant mariner credential(s) applied for. <i>See footnote 1 of this table & enclosure (5) of this NVIC.</i>
Make verbal reports or call attention to suspicious or emergency conditions.	Describe immediate surroundings and activities, and pronounce words clearly.	Is capable of normal conversation.
Participate in firefighting activities.	Be able to carry and handle fire hoses and fire extinguishers.	Is able, without assistance, to pull an uncharged 1.5 inch diameter, 50' fire hose with nozzle to full extension, and to lift a charged 1.5 inch diameter fire hose to fire fighting position.
Abandon ship.	Use survival equipment.	Has the agility, strength and range of motion to put on a personal flotation device and exposure suit without assistance from another individual.

¹ The vision and hearing standards listed in enclosure (5) are not applicable to entry level ratings, nor to cadet, student observer, apprentice engineer or apprentice mate ratings. As discussed in enclosure (1), examining medical practitioners should use form CG-719K/E to document their examination of applicants for these ratings. Examining medical practitioners should note any concerns with the eyesight and/or hearing capacity of applicants for these ratings on the CG-719K/E so that the Coast Guard can make an appropriate determination as to the fitness of the individual for the rating(s). Examining medical practitioners may attach additional sheets to the CG-719K/E for this purpose.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

1. Active Condition. If not specified as “history of” in this table, a condition must be currently active to be subject to further review. For purposes of this enclosure, “active” means that the applicant is currently under treatment for the condition, or that the applicant is currently under observation for possible worsening or recurrence of the condition, or that the condition is currently present.
2. History. As used in this enclosure, the term “history of” means a previous diagnosis or treatment of a medical condition by a healthcare provider, even once in the applicant’s life, unless otherwise specified in this table. It includes all active and present medical conditions.
3. Significant Functional Impairment. As used in this enclosure, the term “significant functional impairment” means that the medical condition impairs the applicant’s ability to fully perform the physical abilities listed in enclosure (2), or that it otherwise interferes with the ability of the applicant to fully perform the duties and responsibilities of the credential.
4. Status Reports, Evaluation Reports and Consultations. All time frames specified with respect to the evaluation data listed in this table are measured from the date that the application is received by the Coast Guard. For example, if the table calls for a medical test that is no more than 90 days old, the test should have been completed no more than 90 days before the date that the application for the credential is received by the Coast Guard.

For most conditions, this table does not contain a specific time frame as to how old a status report, evaluation report or consultation (of whatever type) may be. For all active conditions (as defined in paragraph 1 above), the status report, evaluation report or consultation should have been completed no more than one year prior to the date the application is received by the Coast Guard.

For conditions that are not active but for which the table indicates that a “history of” the condition should be reported (as defined in paragraph 2 above), the appropriate time frame, if not specified in the table, depends on what is medically relevant given the individual circumstances of the applicant’s condition. Medical providers should contact NMC if they have any questions about how recent a status report, evaluation report or consultation should be. *See* 46 CFR 10.205(d)(4).

5. Other conditions. Any medical condition or physical impairment not otherwise specified in this enclosure which may cause significant functional impairment or sudden incapacitation, or which might otherwise compromise shipboard safety, including required response in an emergency situation, may be subject to further review. Any medical condition or physical impairment not otherwise specified in this enclosure which may result in gradual deterioration of performance of duties, or which otherwise poses a threat to the health and safety of the applicant or others, may be subject to further review.
6. Medications, Vitamins and Dietary Supplements. Mariners should not perform a safety sensitive function on any vessel while under the influence of any substance that may negatively impact their performance. To that end, mariners are strongly

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

warned that some prescription medications, over-the-counter medications, vitamins and dietary supplements, alone or in combination with other substances, may adversely affect an individual's ability to perform critical functions and place the individual at risk of sudden incapacitation. Mariners are strongly advised to seek the advice of a physician before taking any medications, vitamins, or dietary supplements.

Mariners should read and follow the manufacturer's warnings and directions, and the warnings and directions of their own physicians, in order to minimize the risk of adverse affects. Notwithstanding, little is known about the effects of some supplements and their interaction with other substances. Therefore, the risks associated with their use cannot be determined. See enclosure (4).

7. Alternate Evaluation Data. At the time of publication of this NVIC, the evaluation data listed in this table is what the Coast Guard recommends should be submitted for each condition. Submission of other than the recommended evaluation data may result in processing delay.

Documentation of evaluation data specified in this table for all applicable medical conditions subject to further review should be submitted with each application, unless otherwise specified by the NMC. Mariners, including first class pilots and those individuals "serving as" pilots (as well as Great Lakes pilots) who are required to submit annual physical examinations to the Coast Guard, may be issued a letter by the NMC specifying the extent of the evaluation data, if any, that should be submitted to the Coast Guard for any medical conditions that have been previously reported to, and evaluated by, the NMC.

The Coast Guard will consider alternative approaches proposed by applicants regarding substitution of evaluation data for the recommended evaluation data listed in this table, if the alternative approach satisfies the requirements of the applicable statutes and regulations. If you wish to discuss alternative approaches, you should contact the NMC Medical Evaluations Branch, which is responsible for implementing this guidance. Contact information for the NMC Medical Evaluations Branch is listed in paragraph 8 on page 5 of the NVIC.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
HEAD, FACE, NECK, AND SCALP		
1	Fistula of neck, either congenital or acquired, including tracheotomy	Copies of all pertinent consultations, CT/MRI reports (and films, if available); plus if surgery has been done, copies of the operative and pathology reports; if malignant, an oncology evaluation as well.
2	Deformities of the face or head that may interfere with the proper fitting and wearing of respiratory protection	Copies of all pertinent consultations, CT/MRI reports (and films, if available) and quantitative respiratory fit testing; plus if surgery has been done, copies of the operative and pathology reports; if malignant, an oncology evaluation as well.
3	History of tumor within the last 5 years	<p>Local expansion and impingement on adjacent structures is the initial manifestation of most of these tumors. The extensive resection and resultant loss of structures vital for speech, swallowing (and control of secretions) and equipment fit will be important post-therapy concerns in medical certification of affected mariners. Appropriate candidates for waiver are those mariners whose tumors have been completely removed in a manner that has not disturbed the surrounding structures needed to perform duties. Impairment of speech, secretion control, and equipment fit are not considered favorably for waiver. Confirmation of the histology is necessary. In addition, documentation of return of function of "quality" speech, swallowing/control of secretions, and equipment fit are required.</p> <p>Basal cell carcinomas with only local excisions do not require this evaluation.</p>
MOUTH AND THROAT		
4	Any malformation or condition, including stuttering, that impairs voice communication	Refer for speech pathology consult.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
EARS		
5	Acute or chronic disease that may disturb equilibrium	Document hearing loss, labyrinthine dysfunction, and facial nerve weakness or paralysis. Audiology (to include speech discrimination in each ear) and neurology evaluations are required. Surgical and pathology reports are also required if applicable.
6	Mastoid Fistula	Document hearing loss, labyrinthine dysfunction, and facial nerve weakness or paralysis. Audiology (to include speech discrimination in each ear) and otolaryngology evaluations are required. Surgical and pathology reports are also required if applicable.
7	Mastoiditis, acute or chronic	Document hearing loss, labyrinthine dysfunction, and facial nerve weakness or paralysis. Audiology (to include speech discrimination in each ear) and otolaryngology evaluations are required. Surgical and pathology reports are also required if applicable.
8	History of Acoustic Neuroma	A request for waiver may be submitted 6 months after successful removal of the tumor provided the sequelae are within acceptable limits. Specifically, the tumor should have been 2.5 cm diameter or less; unilateral, postoperative vertigo should have completely resolved; and any damage to cranial nerves should allow full eye movement without strabismus or tracing deficit and acceptable mask sealing. Psychomotor performance should be within normal limits. Document hearing loss, labyrinthine dysfunction, and facial nerve weakness or paralysis. Audiology (to include speech discrimination in each ear), neurology and neurosurgery evaluations are required. Surgical and pathology reports are also required.
9	Otitis Externa or Otitis Media that may progress to impaired hearing or become incapacitating	Document hearing loss, labyrinthine dysfunction, and facial nerve weakness or paralysis. Audiology (to include speech discrimination in each ear) and otolaryngology evaluations are required. Surgical and pathology reports are also required if applicable.
10	History of episodic disorders of dizziness or disequilibrium within the last 10 years	Document hearing loss, labyrinthine dysfunction, and facial nerve weakness or paralysis. Audiology (to include speech discrimination in each ear) and neurology evaluations are required. Surgical and pathology reports are also required if applicable.
EYES, GENERAL		
11	Monocular vision	See Enclosure (4). Uncompensated monocular vision is generally not waiverable. Contact NMC for guidance. <u>Note:</u> Applicant should be at best corrected visual acuity before evaluation.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
12	Ophthalmic pathology reflecting a serious systemic disease (e.g., diabetic and hypertensive retinopathy)	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.
13	Any other acute or chronic pathological condition of either eye or adnexa that interferes with the proper function of an eye	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.
14	Diplopia	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.
15	Pterygium occluding 50% of the cornea and affecting central vision	If less than 50% of the cornea and not affecting central vision; if more than 50% requires ophthalmology consultation, to include refraction measurement and visual acuity, visual field test battery, corneal topography, slit lamp examination.
16	Refractive Surgery within past 6 months	Ophthalmology consultation, to include refraction measurement and visual acuity, corneal topography, slit lamp examination looking at the quantity, quality, and extent of incisions, contrast sensitivity testing. Provide completed, type and date of procedure, statement as to any adverse effects or complications (halo, glare, haze, rings, etc.). <u>Note:</u> Waiver package should be submitted at least, i.e. not sooner than, 4 weeks after the surgery, with a minimum of two stable visual acuities measured, at least two weeks apart.
17	Chorioretinitis; Coloboma	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
18	Corneal Ulcer or Dystrophy	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.
19	Optic Atrophy or Neuritis	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology to include neurology consultation to rule out multiple sclerosis, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.
20	Retinal Degeneration or Detachment	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.
21	Retinitis Pigmentosa	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.
22	Papilledema or Uveitis	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy. In addition provide applicable documentation regarding presence of associated diseases causing uveitis, such as sarcoidosis, ankylosing spondylitis, tuberculosis, syphilis and toxoplasmosis. These conditions should be excluded and the following initial studies should be completed: CXR, Syphilis Serology, PPD, Lyme serology, HLA B 27, Angiotensin Converting Enzyme, and ANA.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
23	Glaucoma (treated or untreated) or Increased Intraocular Ocular Pressure (IOP)	<p>Waivers may be granted if visual field loss is minimal and IOP is controlled at normal levels without miotic drugs. Miotic drugs are incompatible with night operations due to the inability of the pupil to dilate to admit sufficient light. Ophthalmology consultation is required anytime there is one or more documented IOPs > or equal to 22 mmHg; there is an IOP difference between the eyes of 4 mmHg or greater; there is a optic nerve cup-to-disc ratio > 0.5 or an asymmetrical cup-to-disc ratio between the eyes with a difference of > 0.2; or a visual field deficit is suspected; and when there is a recent change of visual acuity, ocular trauma, uveitis, or iritis. Optometrist or ophthalmologist should confirm the IOP with applanation tonometry. Ophthalmology IOPs should be documented from a Goldman's applanation tonometer, not from a non-contact tonometer "puff test" or Tono-pen, and should be obtained in the AM and PM for two days. Consultation reports should include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, and gonioscopy. If a low IOP of 7 mm Hg or less is confirmed by Goldman applanation tonometry an ophthalmology consultation should be obtained. FOLLOW-UP: Mariners with proven glaucoma should be evaluated quarterly at least for the first year of treatment unless the consultant ophthalmologist specifies less frequent. If the mariner is determined to have elevated IOP with suspected glaucomatous changes, he or she should be measured and evaluated every 6 months by an ophthalmologist or optometrist for those mariners labeled with ocular hypertension or glaucoma suspect. If the mariner has elevated IOP without any suspected glaucomatous changes, ophthalmological evaluation should be conducted annually.</p>
24	Macular Degeneration	<p>Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.</p>
25	Macular Detachment	<p>Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.</p>

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
26	History of Tumors	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.
27	Vascular Occlusion	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.
28	Retinopathy	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.
29	Disparity in size or reaction to light (afferent pupillary defect) or nonreaction to light in either eye, acute or chronic due to pathologic condition	Neurophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.
30	Nystagmus	Neurology consultation. If nystagmus has been present for a number of years and has not recently worsened, it is usually necessary to consider only the impact that the nystagmus has upon visual acuity. If visual acuity is affected, submit ophthalmology consultation.
31	Synechiae, anterior or posterior	Ophthalmology consultation, to include dilated fundus examination, legible drawings of bilateral optic discs noting mathematical estimates of the cup-to-disc ratio, and optic disc, report of slit lamp examination, visual field test battery, confirmation of the exclusion of underlying systemic pathology, confirmation that visual acuity meets standards, presence of color vision abnormalities, and gonioscopy.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
32	Absence of conjugate alignment in any quadrant	Ophthalmology consultation, to include any history of ambliopia (lazy eye) or diplopia, any patching of one/both eyes, or previous eye surgery, and include the following tests: full ocular muscle balance testing, Verhoeff vision testing apparatus (VTA), or Randot depth perception testing, testing for diplopia in the nine cardinal directions, pupillary exam, cover test (both near and far), alternate cover test, near point of conversion (NPC), red lens test, Maddox Rod test, Worth four-dot exam, and AO vectograph.
33	Inability to converge on a near object	Ophthalmology consultation, to include measurement of convergence insufficiency distance.
34	Paralysis with loss of ocular motion in any direction	Ophthalmology consultation, to include any history of ambliopia (lazy eye) or diplopia, any patching of one/both eyes, or previous eye surgery, and include the following tests: full ocular muscle balance testing, Verhoeff vision testing apparatus (VTA), or Randot depth perception testing, testing for diplopia in the nine cardinal directions, pupillary exam, cover test (both near and far), alternate cover test, near point of conversion (NPC), red lens test, Maddox Rod test, Worth four-dot exam, and AO vectograph.
LUNGS AND CHEST		
35	Asthma symptoms requiring emergency treatment in the past 2 years	Internal medicine and/or pulmonology consultation to include complete pulmonary function testing (PFT). Baseline, post bronchodilator, and methacholine/provocative testing results. Examiner statement on applicant's asthma severity class according to National Asthma Education and Prevention Program Expert Panel Report 2: Guidelines for the Diagnosis and Management of Asthma (http://www.nhlbi.nih.gov/health/prof/lung/asthma/practgde.htm). Examiner statement addressing any sudden severe exacerbations, severe persistent or moderate persistent asthma, any hospitalizations or intubations for exacerbations, or recurrent oral steroid use for exacerbations. <u>Note:</u> Non-sedating antihistamines including loratadine or fexofenadine may be used while underway, after adequate individual experience has determined that the medication is well tolerated without significant side effects.
36	Chronic bronchitis, emphysema, or COPD	Internal medicine and/or pulmonology consultation to include pulmonary function testing (PFT) with bronchodilator challenge, chest x-ray or CT to exclude bullae, and EKG. Exercise stress ECG with pulse oximetry is required to assess pulmonary function during exertion if FVC or FEV1 are less than 75% predicted value.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
37	Abscesses	Internal medicine and/or pulmonology consultation to include pulmonary function testing (PFT), imaging studies, if applicable, operative/pathology/microbiology studies, if applicable, current treatment, and documentation of resolution or stability of the condition.
38	Mycotic Disease	Internal medicine and/or pulmonology consultation to include pulmonary function testing (PFT), imaging studies, if applicable, operative/pathology/microbiology studies, if applicable, current treatment, and documentation of resolution or stability of the condition.
39	Tuberculosis or Untreated Latent Tuberculosis Infection (LTI)	Internal medicine and/or pulmonology consultation with documentation of complete recovery from infection, including post-convalescent negative sputum cultures, if applicable, CXR. <u>Note:</u> Applicants with LTI and no evidence of disease receiving treatment do not require a waiver. Active TB is not waiverable until 6 months after treatment is completed.
40	Fistula, Bronchopleural, to include Thoracostomy	Internal medicine and/or pulmonology consultation to include pulmonary function testing (PFT), imaging studies, if applicable, operative/pathology/microbiology studies, if applicable, current treatment, and documentation of resolution or stability of the condition.
41	Lobectomy with loss of functional capacity	Internal medicine and/or pulmonology consultation to include pulmonary function testing (PFT), copies of operative reports. Exercise stress ECG with pulse oximetry is required to assess pulmonary function during exertion if FVC or FEV1 are less than 75% predicted value.
42	Pulmonary Fibrosis	Internal medicine and/or pulmonology consultation to include pulmonary function testing (PFT), and imaging studies. Exercise stress ECG with pulse oximetry is required to assess pulmonary function during exertion if FVC or FEV1 are less than 75% predicted value.
43	Sleep Disorders	Submit all pertinent medical information and current status report from a qualified sleep medicine specialist. Include sleep study with a polysomnogram, use of medications and titration study results. If surgically treated, should have post operative polysomnogram to document cure or need for further treatment.
44	Acute fibrinous pleurisy	Internal Medicine and/or pulmonology consultation to include pulmonary function testing (PFT), imaging studies, if applicable, operative/pathology/microbiology studies, if applicable, current treatment, and documentation of resolution or stability of the condition. Exercise stress ECG with pulse oximetry is required to assess pulmonary function during exertion if FVC or FEV1 are less than 75% predicted value.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
45	Empyema	Internal Medicine and/or pulmonology consultation to include pulmonary function testing (PFT), copies of operative reports, imaging studies, if applicable, operative/pathology/microbiology studies, if applicable, current treatment, and documentation of resolution or stability of the condition. Exercise stress ECG with pulse oximetry is required to assess pulmonary function during exertion if FVC or FEV1 are less than 75% predicted value.
46	Pleurisy with effusion	Internal Medicine and/or pulmonology consultation to include pulmonary function testing (PFT), imaging studies, if applicable, operative/pathology/microbiology studies, if applicable, current treatment, and documentation of resolution or stability of the condition. Exercise stress ECG with pulse oximetry is required to assess pulmonary function during exertion if FVC or FEV1 are less than 75% predicted value.
47	Pneumonectomy	Thoracic surgery consultation with status report, CXR, PFTs, copies of operative reports. Exercise stress ECG with pulse oximetry is required to assess pulmonary function during exertion if FVC or FEV1 are less than 75% predicted value.
48	History of tumors or cysts of the lung, pleura or mediastinum within the last 5 years	Oncology consultation with status report, CXR, PFTs, copies of operative reports if history of surgery. Exercise stress ECG with pulse oximetry is required to assess pulmonary function during exertion if FVC or FEV1 are less than 75% predicted value.
48a	History of malignant tumors of the breast within the last 5 years	Oncology consultation with status report, diagnostic imaging studies and copies of operative reports if history of surgery.
49	Sarcoid, if more than minimal involvement or if symptomatic	Submit all pertinent medical records, pulmonology consultations to include characteristics and severity of symptoms, names and dosages of medications and side effects. Contact NMC for guidance.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
50	Traumatic pneumothorax within past 3 months or history of spontaneous or recurrent non-traumatic pneumothorax	<p>Chest x-ray, thin-cut CT scan demonstrating full lung expansion, PFTs, copy of operative report and thoracic surgery consult if surgically treated. Exercise stress ECG with pulse oximetry is required to assess pulmonary function during exertion if FVC or FEV1 are less than 75% predicted value.</p> <p><u>Note:</u> A history of a single episode of spontaneous pneumothorax is considered disqualifying for medical certification until there is x-ray evidence of resolution and until it can be determined that no condition that would be likely to cause recurrence is present (i.e., residual blebs). An applicant who has sustained a repeat pneumothorax normally is not eligible for certification until surgical interventions are carried out to correct the underlying problem. A person who has such a history can be evaluated 3 months after the surgery.</p>
51	Bronchiectasis	<p>Internal Medicine and/or pulmonology consultation to include pulmonary function testing (PFT), imaging studies, if applicable, operative/pathology/microbiology studies, if applicable, current treatment, and documentation of resolution or stability of the condition. Exercise stress ECG with pulse oximetry is required to assess pulmonary function during exertion if FVC or FEV1 are less than 75% predicted value.</p>
HEART		
52	Symptomatic Bradycardia (<50 bpm)	<p>Exercise rhythm strip. If unable to achieve HR >100 BPM or double resting HR then GXT and 24-hour Holter monitor are required.</p> <p><u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.</p>
53	Left Bundle Branch Block	<p>Cardiology consultation, PA and lateral CXR, GXT, echocardiogram, and exercise radionuclide scan.</p> <p><u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.</p>
54	Acquired Right Bundle Branch Block	<p>Cardiology consultation, PA and lateral CXR, GXT, echocardiogram, and exercise radionuclide scan.</p> <p><u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.</p>

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
55	Implanted Pacemaker	<p>Cardiology consultation, PA and lateral CXR, GXT, echocardiogram, and exercise radionuclide scan. Detailed reports of surgical procedures as well as cerebral and coronary arteriography and other major diagnostic studies are of prime importance; evaluation of pacemaker function to include description and documentation of underlying rate and rhythm with the pacer disabled or at its lowest setting, programmed pacemaker parameters, surveillance record, and exclusion of myopotential inhibition and pacemaker induced hypotension, powerpack data including beginning of life (BOL) and elective replacement indicator/end of life (ERI/EOL).</p> <p><u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.</p>
56	Premature Atrial Contractions	<p>If PAC frequency of occurrence is > 10 of any 50 beats, 10% of any one hour, or 1% of 24 hours of monitoring, or applicant is symptomatic cardiology consultation, 24-hour Holter monitor, echocardiogram, and GXT are required.</p> <p><u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.</p>
57	Premature Ventricular Contractions	<p>If PVC frequency of occurrence is > 10 of any 50 beats, 10% of any one hour, or 1% of 24 hours of monitoring, or applicant is symptomatic cardiology consultation, 24-hour Holter monitor, echocardiogram, and GXT are required.</p> <p><u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.</p>
58	2nd Degree AV Block Mobitz I	<p>Cardiology consultation, PA and lateral CXR, GXT, and exercise radionuclide scan.</p> <p><u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.</p>
59	2nd Degree AV Block Mobitz II	<p>Cardiology consultation, PA and lateral CXR, GXT, and exercise radionuclide scan.</p> <p><u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.</p>
60	3rd Degree AV Block	<p>Cardiology consultation, PA and lateral CXR, GXT, and exercise radionuclide scan.</p> <p><u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.</p>

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
61	Preexcitation Syndrome	Cardiology consultation, 24-hour Holter monitor, GXT and echocardiogram. <u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.
62	History of Radio Frequency Ablation	3-month wait, then cardiology consultation, 24-hour Holter monitor, GXT and echocardiogram. <u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.
63	History of Supraventricular Tachycardia (3 or more consecutive non-ventricular ectopic beats)	Cardiology consultation, 24-hour Holter monitor, GXT, TFTs, and echocardiogram. If evidence of abnormalities exercise radionuclide scan and cardiac catheterization are required and surgical/ablative procedure reports if performed. <u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.
64	History of syncope, greater than one episode, within the last 5 years	Cardiology consultation, neurology consultation, 24-hour Holter; bilateral carotid US.
65	History of Atrial Fibrillation within the last 5 years	Document previous workup for CAD and structural heart disease, to include cardiology consultation addressing use of anticoagulants and functional capacity, 24-hour Holter monitor, GXT and echocardiogram. <u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.
66	Chronic Atrial Fibrillation	Cardiology consultation addressing use of anticoagulants and functional capacity, 24-hour Holter monitor, GXT and echocardiogram. <u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.
67	Paroxysmal/Lone Atrial Fibrillation	Cardiology consultation addressing use of anticoagulants and functional capacity, 24-hour Holter monitor, GXT and echocardiogram. <u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.
68	History of Angina Pectoris	Cardiology consultation, hospital admission summaries if applicable, coronary catheterization report, statement of functional capacity, blood chemistries, including total cholesterol, HDL, LDL, and triglycerides, echocardiogram with Doppler flow study, maximal myocardial perfusion exercise stress test no sooner than 6-months post event.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
69	History of Myocardial Infarction	<p>Cardiology consultation, hospital admission summaries if applicable, coronary catheterization report, statement of functional capacity, blood chemistries, including total cholesterol, HDL, LDL, and triglycerides, echocardiogram with Doppler flow study, maximal myocardial perfusion exercise stress test no sooner than 1 month post event.</p> <p><u>Note:</u> Acceptable treatment of applicants includes all Food and Drug Administration approved diuretics, alpha-adrenergic blocking agents, beta-adrenergic blocking agents, calcium channel blocking agents, angiotension converting enzyme (ACE inhibitors) agents, and direct vasodilators. Centrally acting agents (e.g. reserpine, guanethidine, guanadrel, guanabenz, and methyldopa) are usually not acceptable. The use of flecainide is unacceptable when there is evidence of left ventricular dysfunction or recent myocardial infarction.</p>
70	History of Atherectomy; CABG; PTCA; Rotoblation; or stent	<p>Cardiology consultation, hospital admission summaries if applicable, coronary catheterization report, statement of functional capacity, blood chemistries, including total cholesterol, HDL, LDL, and triglycerides, echocardiogram with Doppler flow study, maximal myocardial perfusion exercise stress test no sooner than 1 month post event, 6 months for CABG.</p>
71	Hypertension, systolic BP > 160 or diastolic BP > 100, with or without medication	<p>ECG, serum chemistries, lipid profile, UA, documentation of family history of CAD, DM, hypertension, CVA, hyperlipidemia, and renal disease.</p> <p><u>Note:</u> An initial reading exceeding 160/100 should be confirmed by three blood pressure readings separated by at least 24 hours each. Acceptable treatment of applicants includes all Food and Drug Administration approved diuretics, alpha-adrenergic blocking agents, beta-adrenergic blocking agents, calcium channel blocking agents, angiotension converting enzyme (ACE inhibitors) agents, and direct vasodilators. Centrally acting agents (e.g. reserpine, guanethidine, guanadrel, guanabenz, and methyldopa) are usually not acceptable.</p>
72	History of Valvular Disease, non-specified	<p>Cardiology consultation, GXT, 2-D M-mode echocardiogram with Doppler flow study and 24-hour Holter monitor.</p> <p><u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.</p>
73	Aortic and Mitral Insufficiency	<p>Cardiology consultation, GXT, 2-D M-mode echocardiogram with Doppler flow study and 24-hour Holter monitor.</p> <p><u>Note:</u> GXT should be Bruce Protocol to at least 8 METS with a functional cardiac stress test. Pharmacologic Stress Tests are not acceptable.</p>

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
74	History of Valve Replacement	Cardiology consultation addressing cardiac function, evidence of embolic phenomena, arrhythmias, structural abnormalities, or ischemia. GXT, 2-D M-mode echocardiogram with Doppler flow study and 24-hour Holter monitor, INR values for 6 months prior to application, copy of operative report.
75	History of Valvuloplasty	Cardiology consultation, GXT, 2-D M-mode echocardiogram with Doppler flow study, 24-hour Holter monitor, and copy of operative report.
76	History of Heart Transplant	Generally not waiverable. Contact NMC for guidance.
77	Cardiac decompensation or cardiomyopathy	Cardiology consultation, GXT, 2-D M-mode echocardiogram with Doppler flow study and 24-hour Holter monitor.
78	Congenital heart disease accompanied by cardiac enlargement, ECG abnormality, or evidence of inadequate oxygenation	Cardiology consultation addressing cardiac function, evidence of embolic phenomena, arrhythmias, structural abnormalities, or ischemia. GXT, 2-D M-mode echocardiogram with Doppler flow study and 24-hour Holter monitor.
79	CHF, Hypertrophy or dilatation of the heart	Cardiology consultation, GXT, 2-D M-mode echocardiogram with Doppler flow study and 24-hour Holter monitor.
80	Pericarditis, endocarditis, or myocarditis	Cardiology consultation addressing cardiac function, GXT, 2-D M-mode echocardiogram with Doppler flow study and 24-hour Holter monitor, and documentation of resolution or stability of the condition.
81	Anti-tachycardia devices or implantable defibrillators	Generally not waiverable. See Enclosure (7) for guidance.
VASCULAR SYSTEM		
82	History of Aortic Aneurysm, Abdominal or Thoracic	Surgery and cardiology consultations, hospital admission summaries and operative reports if applicable, coronary catheterization report, statement of functional capacity, blood chemistries, including total cholesterol, HDL, LDL, and triglycerides, echocardiogram with Doppler flow study, maximal myocardial perfusion exercise stress test.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
84	Symptomatic Arteriosclerotic Vascular disease	Cardiology consultation, hospital admission summaries if applicable, coronary catheterization report, statement of functional capacity, blood chemistries, including total cholesterol, HDL, LDL, and triglycerides, echocardiogram with Doppler flow study, maximal myocardial perfusion exercise stress test.
85	Buerger's Disease	Internal Medicine consultation to include documentation of normal extremity function and exercise tolerance.
86	Thrombophlebitis	Internal Medicine consultation to include documentation of normal exercise tolerance.
ABDOMEN, VISCERA AND ANUS CONDITIONS		
87	Cirrhosis- Alcoholic	Internal medicine or gastroenterology consultation with status report, to include history of encephalopathy; LFTs, albumin; bilirubin; and CBC. See also medical conditions 186 and 186a.
88	Cirrhosis- Non-Alcoholic	Internal medicine or gastroenterology consultation with status report, to include history of encephalopathy; LFTs, albumin; bilirubin; and CBC.
89	History of acute Hepatitis A, B, or E	Internal medicine or gastroenterology consultation with status report, to include history of encephalopathy; LFTs, albumin; bilirubin; and CBC. <u>Note:</u> Not disqualifying if 6 months have elapsed since onset, LFTs have returned to normal, and applicant is asymptomatic. For acute hepatitis B, HB surface antigen should have cleared
90	History of chronic Hepatitis B	Internal medicine or gastroenterology consultation with status report, to include history of encephalopathy; LFTs, albumin; bilirubin; and CBC, liver biopsy, hepatitis replication studies (HBeAg and HB DNA).
91	History of acute Hepatitis C	Internal medicine or gastroenterology consultation with status report, hepatitis replication studies (RNA viral load testing).
92	History of chronic Hepatitis C	Internal medicine or gastroenterology consultation with status report, to include history of encephalopathy; LFTs, albumin; bilirubin; and CBC, liver biopsy, hepatitis replication studies (RNA viral load testing).
93	History of Liver Transplant	Internal medicine or gastroenterology consultation with status report, to include history of encephalopathy; LFTs, albumin; bilirubin; and CBC, name and dosage of drugs and side effects.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
94	History of Colon/Colorectal Cancer within the last 5 years	Oncology consultation documenting staging, histologic diagnosis, TMN tumor stage, any post-operative therapies, operative/ pathology reports, results of restaging, and CEA and CBC.
95	History of Other Gastrointestinal Malignancies within the last 5 years	Oncology consultation documenting staging, histologic diagnosis, TMN tumor stage, any post-operative therapies, operative/ pathology reports, results of restaging, and CEA and CBC.
96	History of Gastrointestinal Bleeding	Internal medicine or gastroenterology consultation with confirmation that applicant is free of symptoms, endoscopic or other evidence that the bleeding source has healed, copies of operative reports if applicable.
SKIN DISEASES		
97	Collagen Vascular Diseases causing significant functional impairment	Dermatology consultation, documenting use of medications, ability to wear protective equipment, and ability to perform duties.
98	Skin Diseases causing significant functional impairment	Dermatology consultation, documenting use of medications, ability to wear protective equipment, and ability to perform duties.
99	History of Malignant Skin Tumors within the last 5 years	Dermatology consultation documenting staging, histologic diagnosis, Breslow depth, tumor stage, any post-operative therapies, ability to wear protective equipment, ability to perform duties, and operative/ pathology reports. Malignant melanoma requires CXR, other imaging studies, if appropriate, and laboratory tests. Basel cell carcinomas with only local excisions do not require this evaluation.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
100	Neurofibromatosis with Central Nervous System involvement	Dermatology consultation, documenting use of medications, ability to wear protective equipment, and ability to perform duties. Neurology consult.
GENITAL-URINARY SYSTEM		
101	Renal Replacement Therapy/Dialysis	Nephrology consultation, BUN, Ca, PO4, creatinine, electrolytes, and treatment plan. <u>Note: Chronic dialysis is generally not waiverable. Contact NMC for guidance.</u>
102	History of Renal Transplant	Nephrology consultation, BUN, Ca, PO4, creatinine, electrolytes,, operative report, and discharge summary, etiology of primary renal disease, evaluation of graft versus host disease, CBC, BUN, creatinine.
102a	Chronic Renal Insufficiency or Chronic Renal Failure (Glomerular Filtration Rate (GFR) < 30 mL/min	Nephrology consultation, BUN, Ca, PO4, creatinine, GFR, electrolytes, and treatment plan. <u>Note: Chronic dialysis is generally not waiverable. Contact NMC for guidance.</u>
103	Acute Nephritis	Nephrology consultation, BUN, Ca, PO4, creatinine, electrolytes, and treatment plan.
104	Chronic Nephritis	Nephrology consultation, BUN, Ca, PO4, creatinine, electrolytes, and treatment plan.
105	Nephrosis	Nephrology consultation, BUN, Ca, PO4, creatinine, electrolytes, and treatment plan.
106	Bladder Cancer within the last 5 years	Oncology or urology consultation documenting staging, histologic diagnosis, tumor stage, any post-operative therapies, operative/ pathology reports, results of restaging, and abdomen-pelvis CT scan, cystoscopy, and contrast study of urinary tract.
107	History of Neoplasms of the kidneys, bladder, or genitourinary tract within the last 5 years	Oncology or urology consultation documenting staging, histologic diagnosis, tumor stage, any post-operative therapies, operative/ pathology reports, results of restaging, and abdomen-pelvis CT scan, cystoscopy, and contrast study of urinary tract.
108	History of Prostatic Carcinoma within the last 5 years	Oncology or urology consultation documenting staging, histologic diagnosis, tumor stage (Gleason grade), any post-operative therapies, operative/ pathology reports, results of restaging, and abdomen-pelvis CT/MRI reports, bone scan reports, and PSA, including post-op PSAs. Document applicant's physical limitations, bladder competence, and any medications.
109	Polycystic Kidney Disease	Nephrology consultation, BUN, Ca, PO4, creatinine, electrolytes, head MRI or MRA, and treatment plan.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
110	Pyelitis, Pyelonephritis or Pylonephrosis	Nephrology consultation, BUN, Ca, PO4, creatinine, electrolytes, and treatment plan.
111	DELETED	INTENTIONALLY BLANK.
112	Hydronephrosis with impaired renal function	Nephrology consultation, BUN, Ca, PO4, creatinine, electrolytes, and treatment plan.
113	Renal Calculus - Multiple Episodes or Retained Stones	Urology consultation, BUN, Ca, PO4, creatinine, electrolytes, imaging studies, if appropriate, and treatment plan. <u>Note:</u> Ureteral stent is acceptable if functioning without sequela.
114	Ureteral or Vesical Calculus-with or without stent	Urology consultation, BUN, Ca, PO4, creatinine, electrolytes, imaging studies, if appropriate, and treatment plan. <u>Note:</u> Ureteral stent is acceptable if functioning without sequela.
115	History of Gender Reassignment	Complete medical history and records to determine that there is no medical, psychiatric, or psychological condition. Medical disqualification is considered appropriate during the time of hormonal manipulation until such time as there is a stabilization of the physiological response on maintenance medication.
MUSCULOSKELETAL		
116	Amputations at or proximal to the metatarsal or metacarpal joints, or any amputation of a thumb or multiple digits on the same extremity	Physical medicine, occupational medicine or orthopedic consultation to include functional status (degree of impairment as measured by strength, range of motion at joints adjacent to amputation, pain), medications with side effects and all pertinent medical reports. <u>Note:</u> When prostheses are used or additional control devices are installed in a vessel to assist the amputee, the credential(s) will be limited to require that the devices (and, if necessary, even the specific vessel) must always be used when acting under the authority of the credential(s).
117	Progressive atrophy of any muscles	Neurology consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
118	Deformities, either congenital or acquired causing significant functional impairment and/or interfering with the ability to wear required personal protective equipment	Physical medicine, occupational medicine or orthopedic consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.
119	Limitation of motion of major joint causing significant functional impairment	Physical medicine, occupational medicine or orthopedic consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.
120	Neuralgia or Neuropathy, chronic or acute causing significant functional impairment	Neurology consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.
121	Sciatica causing significant functional impairment	Neurology or orthopedic consultation to include sufficient documentation to exclude specific causes of back pain, functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.
122	Osteomyelitis, acute or chronic, with or without draining fistula(e) causing significant functional impairment	Orthopedic consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.
123	Tremors causing significant functional impairment	Neurology consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.
124	Osteoarthritis causing significant functional impairment	Rheumatology consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies. <u>Note:</u> Waiver considered for an applicant who is taking aspirin, ibuprofen, naproxen, similar nonsteroidal anti-inflammatory drugs (NSAID), or COX-2 inhibitors; however, the applicant should present evidence documenting that the underlying condition for which the medicine is being taken is not in itself disabling and the applicant has been on therapy (NSAID) long enough to have established that the medication is well tolerated and has not produced adverse side effects.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
125	Rheumatoid Arthritis and Variants causing significant functional impairment	Rheumatology consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies. <u>Note:</u> Waiver considered for an applicant who is taking aspirin, ibuprofen, naproxen, similar nonsteroidal anti-inflammatory drugs (NSAID), or COX-2 inhibitors; however, the applicant should present evidence documenting that the underlying condition for which the medicine is being taken is not in itself disabling and the applicant has been on therapy (NSAID) long enough to have established that the medication is well tolerated and has not produced adverse side effects.
126	Acute Polymyositis	Neurology consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.
127	Dermatomyositis	Rheumatology consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies. <u>Note:</u> Waiver considered for an applicant who is taking aspirin, ibuprofen, naproxen, similar nonsteroidal anti-inflammatory drugs (NSAID), or COX-2 inhibitors; however, the applicant should present evidence documenting that the underlying condition for which the medicine is being taken is not in itself disabling and the applicant has been on therapy (NSAID) long enough to have established that the medication is well tolerated and has not produced adverse side effects.
128	Lupus Erythematosus	Internal medicine consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.
129	Periarthritis Nodosa	Internal medicine consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.
130	Ankylosis, curvature, or other marked deformity of the spinal column causing significant functional impairment	Submit a status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical reports.
131	History of Intervertebral Disc Surgery within the last 5 years	Orthopedic, physical medicine or neurosurgery consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects, all pertinent medical studies, restrictions and prognosis.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
132	Cerebral Palsy, Muscular Dystrophy, Myasthenia Gravis, or other Myopathies	Neurology consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.
133	Other disturbances of musculoskeletal function, congenital or acquired causing significant functional impairment	Orthopedic, physical medicine or neurology consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects, all pertinent medical studies, restrictions and prognosis. <u>Note:</u> The paraplegic whose paralysis is not the result of a progressive disease process is considered in much the same manner as an amputee.
134	Symptomatic herniation of intervertebral disc	Orthopedic, physical medicine or neurosurgery consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects, all pertinent medical studies, restrictions and prognosis.
135	History of recurrent symptomatic back pain causing significant functional impairment within the last 5 years	Orthopedic, physical medicine or neurosurgery consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects, all pertinent medical studies, restrictions and prognosis. <u>Note:</u> "Significant functional impairment" is defined on p. 1 of this enclosure.
136	Scar tissue that involves the loss of function causing significant functional impairment	Orthopedic or physical medicine consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.
LYMPHATICS		
137	History of Hodgkin's Disease Lymphoma within the last 5 years	Oncologist / hematologist consultation documenting staging, histology, past and present treatment(s) together with report of recent CT scans of the chest and abdomen.
138	History of Leukemia, Acute and Chronic - All Types within the last 5 years	Oncologist / hematologist consultation documenting staging, histology, past and present treatment(s).

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
139	History of Chronic Lymphocytic Leukemia within the last 5 years	Oncologist / hematologist consultation documenting staging, histology, past and present treatment(s).
140	Adenopathy secondary to Systemic Disease or Metastasis within last 5 years	Oncologist / hematologist consultation documenting staging, histology, past and present treatment(s).
141	Lymphedema causing significant functional impairment	Orthopedic or surgery consultation to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical studies.
142	History of Lymphosarcoma within the last 5 years	Oncologist / orthopedic consultation documenting staging, histology, past and present treatment(s).
NEUROLOGIC		
143	History of Cerebral Thrombosis	Neurology consultation to include brain MRI, bilateral carotid ultra sound, and cerebral angiography.
144	History of Intracerebral or Subarachnoid Hemorrhage	Neurosurgical consultation and confirmation of successful obliteration of the vascular anomaly, neurologic and neuropsychologic evaluations, reports of MRI or CT scan to confirm absence of hydrocephalus.
145	History of Transient Ischemic Attack	Neurology consultation to include brain MRI, bilateral carotid ultra sound, echocardiogram to include bubble-contrast and cerebral angiography.
146	History of Intracranial Aneurysm	Neurosurgical consultation and confirmation of successful obliteration of the vascular anomaly, neurologic and neuropsychologic evaluations, reports of MRI or CT scan to confirm absence of hydrocephalus.
147	History of Arteriovenous Malformation	Neurosurgical consultation and confirmation of successful obliteration of the vascular anomaly, neurologic and neuropsychologic evaluations, reports of MRI or CT scan to confirm absence of hydrocephalus.
148	Intracranial Tumor within the last 5 years	Oncologist / hematologist consultation documenting staging, histology, past and present treatment(s) report of CT scans and post-operative reports and radiation treatment(s) if applicable. Pituitary tumors also require endocrinology consultation.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
149	History of Pseudotumor Cerebri	Submit all pertinent medical records, neurologic report, name and dosage of medication(s) and side effects. <u>Note:</u> An applicant with a history of benign supratentorial tumors may be considered favorably for a waiver after a minimum satisfactory convalescence of 1 year.
150	DELETED	INTENTIONALLY BLANK
151	Landry-Guillain-Barre Syndrome	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies as indicated including documentation of extremity functional status (degree of impairment as measured by strength, range of motion, pain).
152	Myasthenia Gravis	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies as indicated including documentation of extremity functional status (degree of impairment as measured by strength, range of motion, pain).
153	Multiple Sclerosis	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, including recent MRI, as indicated including documentation of extremity functional status (degree of impairment as measured by strength, range of motion, pain). Functional testing as indicated in enclosure (2).
154	Dystonia Musculorum Deformans	Obtain medical records and neurology consultation, complete neurological evaluation with appropriate laboratory and imaging studies, as indicated including neuro-psychological testing. Functional testing as indicated in enclosure (2).
155	Huntington's Disease	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing. Functional testing as indicated in enclosure (2).
156	Parkinson's Disease	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing. Functional testing as indicated in enclosure (2).
157	Wilson's Disease	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing. Functional testing as indicated in enclosure (2).

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
158	Gilles de la Tourette Syndrome	Obtain medical records and neurology consultation, complete neurological evaluation with appropriate laboratory and imaging studies, as indicated including neuro-psychological testing. Functional testing as indicated in enclosure (2).
159	Alzheimer's Disease	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing.
160	Dementia	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing.
161	Slow viral diseases i.e., Creutzfeldt - Jakob's Disease	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing.
162	History of recurrent headaches of any type that have associated symptoms which can cause sudden incapacitation such as visual disturbances, photophobia, difficulty concentrating, nausea/vomiting, ataxia, paresis, or vertigo	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies to include characteristics, frequency, severity, associated with neurologic phenomena, name and dosage of medication(s) and side effects.
163	Hydrocephalus, secondary to a known injury or disease process; or normal pressure	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing.
164	History of Brain Abscess	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing.
165	History of Encephalitis	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing.
166	History of Bacterial Meningitis within the last 5 years	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing.
167	Neurosyphilis	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
168	History of disturbance of consciousness without identifiable cause within the last 5 years	Neurology consultation with complete neurological evaluation and appropriate laboratory and CT, MRI, and EEG studies, as indicated.
169	History of Seizure Disorder, excluding Febrile Seizures prior to age 5	Submit all pertinent medical records, neurology consultation, to include characteristics, frequency, severity, associated with neurologic phenomena, name and dosage of medication(s) and side effects. See Enclosure (8) for guidance.
170	DELETED	INTENTIONALLY BLANK.
171	History of transient loss of nervous system function(s) without identifiable cause, e.g. transient global amnesia	Neurology consultation with complete neurological evaluation and appropriate laboratory and CT, MRI, and EEG studies, as indicated including neuro-psychological testing.
172	Trigeminal Neuralgia	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies to include characteristics, frequency, severity, associated with neurologic phenomena, name and dosage of medication(s) and side effects.
173	History of Head Trauma within the last 10 years associated with: Epidural or Subdural Hematoma; Focal Neurologic Deficit; Depressed Skull Fracture; or Unconsciousness or disorientation of more than one hour following injury	Neurology consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing. Submit all pertinent medical records, current status report, to include pre-hospital and emergency department records, operative reports, neurosurgical evaluation, name and dosage of medication(s) and side effects.
174	Meniere's Disease	Neurology consultation, to include characteristics, frequency, severity, associated with neurologic phenomena, name and dosage of medication(s) and side effects, otolaryngology and audiology consults.
175	Acute Peripheral Vestibulopathy	Neurology and otolaryngology consultations, to include characteristics, frequency, severity, associated with neurologic phenomena, name and dosage of medication(s) and side effects.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
176	Nonfunctioning Labyrinths	Neurology and otolaryngology consultations, to include characteristics, frequency, severity, associated with neurologic phenomena, name and dosage of medication(s) and side effects.
177	Vertigo or Disequilibrium	Neurology and otolaryngology consultations, to include characteristics, frequency, severity, associated with neurologic phenomena, name and dosage of medication(s) and side effects.
178	Orthostatic Hypotension causing Vertigo or Disequilibrium	Neurology and otolaryngology consultations, to include characteristics, frequency, severity, associated with neurologic phenomena, name and dosage of medication(s) and side effects.
179	Sleep Apnea, Central Sleep Apnea, Narcolepsy, Periodic Limb Movement, Restless Leg Syndrome or other sleep disorders	Submit all pertinent medical information and status report. Include sleep study with a polysomnogram, use of medications and titration study results. If surgically treated, should have post operative polysomnogram to document cure or need for further treatment.
PSYCHIATRIC		
180	Adjustment Disorders	Psychiatrist or clinical psychologist clinical status report documenting the diagnosis (DSM Axis I) and addressing any disturbances of thought, recurrent episodes, and psychotropic medication(s) to include documenting the period of use, name and dosage of any medication(s) and side-effects used for less than 6 months and discontinued for at least 3 months. <u>Note:</u> Waivers considered if medications used for less than 6 months and discontinued for at least 3 months.
181	Attention Deficit Disorder	Psychiatrist or clinical psychologist clinical status report documenting the diagnosis (DSM Axis I) and addressing any disturbances of thought, recurrent episodes, and psychotropic medication(s) to include documenting the period of use, name and dosage of any medication(s) and side-effects.
182	Bipolar Disorder	Psychiatrist or clinical psychologist clinical status report documenting the diagnosis (DSM Axis I) and addressing any disturbances of thought, recurrent episodes, and psychotropic medication(s) to include documenting the period of use, name and dosage of any medication(s) and side-effects.
183	Dysthymic or Bereavement Disorder	Psychiatrist or clinical psychologist clinical status report documenting the diagnosis (DSM Axis I) and addressing any disturbances of thought, recurrent episodes, and psychotropic medication(s) to include documenting the period of use, name and dosage of any medication(s) and side-effects.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
184	Clinical Depression	Psychiatrist or clinical psychologist clinical status report documenting the diagnosis (DSM Axis I) and addressing any disturbances of thought, recurrent episodes, and psychotropic medication(s) to include documenting the period of use, name and dosage of any medication(s) and side-effects.
185	Psychotic Disorder	Contact NMC for guidance.
186	History of substance or alcohol abuse, as defined in current DSM, within the last 5 years	<p>For issuance of credentials, an evaluation report completed within the last year, including a determination that the individual is safe to work, from a DOT-qualified SAP, physician certified by American Society of Addiction Medicine, or any other addiction specialist accepted by the Coast Guard, and reports from the rehabilitation clinic/center (if any). Contact NMC if you have any questions regarding acceptable addiction specialists.</p> <p>For applicants with a history of substance abuse within the last 5 years, if they are renewal and/or raise in grade applicants who have been subject to the dangerous drug testing requirements in 46 CFR Part 16 for at least three years prior to the date of application, and if they have no verified non-negative test results (i.e. positive, adulterated, substituted, or refusal) for the entire time that they have held the credential being renewed and/or raised in grade, no evaluation data should be submitted.</p> <p>If a non-negative test result has been reported to the Coast Guard at any time that the applicant has held the credential being renewed and/or raised in grade, the applicant should submit the evaluation data specified for issuance of credentials.</p>

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
186a	History of substance or alcohol dependence as defined in current DSM	<p>For issuance of credentials, an evaluation report completed within the last year, including a determination that the individual is safe to work, from a DOT-qualified SAP, physician certified by American Society of Addiction Medicine, or any other addiction specialist accepted by the Coast Guard, and reports from the rehabilitation clinic/center (if any). Should have at least 90 days of documented abstinence before applying for a credential. Contact NMC if you have any questions regarding acceptable addiction specialists.</p> <p>For applicants with a history of substance dependence, if they are renewal and/or raise in grade applicants who have been subject to the random dangerous drug testing requirements in 46 CFR Part 16 for at least five years prior to the date of application, and if they have no verified non-negative test results (i.e. positive, adulterated, substituted, or refusal) for the entire time that they have held the credential being renewed and/or raised in grade, no evaluation data should be submitted.</p> <p>If a non-negative test result has been reported to the Coast Guard at any time that the applicant has held the credential being renewed and/or raised in grade, the applicant should submit the evaluation data specified for issuance of credentials.</p>
187	History of Suicide Attempt within the last 5 years	Psychiatrist or clinical psychologist clinical status report documenting the diagnosis (DSM Axis I) and addressing any disturbances of thought, recurrent episodes, and psychotropic medication(s) to include documenting the period of use, name and dosage of any medication(s) and side-effects.
188	Organic mental disorders that cause a cognitive defect	Psychiatric consultation with complete neurological evaluation and appropriate laboratory and imaging studies, as indicated including neuro-psychological testing.
BLOOD AND BLOOD-FORMING TISSUE DISEASE		
189	Anemia with hemoglobin < 10.0 grams per deciliter	Submit an internal medicine or hematology consultation with clinical history of the condition and medications, including diagnosis and course. Include a CBC with reticulocyte count, electrophoresis in cases of thalassemia and hemoglobinopathies. (In the case of sickle cell trait, the electrophoresis should document hemoglobin A > hemoglobin S) Hemoglobin A2 quantification in cases of beta-thalassemia trait, serum iron, TIBC, and serum ferritin in cases of thalassemia trait.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

No.	MEDICAL CONDITION	RECOMMENDED EVALUATION DATA
190	Hemophilia	Submit an internal medicine or hematology consultation with clinical history of the condition, including diagnosis and course. Include a CBC with reticulocyte count.
191	Other disease of the blood or blood-forming tissues causing significant functional impairment	Submit an internal medicine or hematology consultation with clinical history of the condition, including diagnosis and course. Include a CBC with reticulocyte count, electrophoresis in cases of thalassemia and hemoglobinopathies. (In the case of sickle cell trait, the electrophoresis should document hemoglobin A > hemoglobin S) Hemoglobin A2 quantification in cases of beta-thalassemia trait, serum iron, TIBC, and serum ferritin in cases of thalassemia trait.
192	Polycythemia	Submit an internal medicine or hematology consultation with clinical history of the condition, including diagnosis and course.
ENDOCRINE DISORDERS		
193	Diabetes Mellitus requiring Insulin or history of DKA	Internal Medicine consultation documenting interval history, blood pressure and weight, evaluation of fasting plasma glucose; and, two current HgA1C's (<8.0) separated by at least 90 days, the most recent no more than 90 days old, ophthalmology consultation, graded exercise test.
194	Diabetes requiring Oral Medication	Internal Medicine consultation documenting interval history, blood pressure and weight, evaluation of fasting plasma glucose; and, two current HgA1C's (<8.0) separated by at least 90 days, the most recent no more than 90 days old, ophthalmology consultation.
195	Addison's Disease	Endocrinology consultation with status to include names and dosage of medication(s) and side effects.
196	Cushing's Disease or Syndrome	Endocrinology consultation with status to include names and dosage of medication(s) and side effects.
197	Hypoglycemia, whether functional or a result of pancreatic tumor	Internal Medicine consultation documenting interval history and GTT to document response to glucose load (Blood glucose and symptoms).
198	Hyperthyroidism	Endocrinology or internal medicine consultation, ophthalmology consultation, and recent (within the previous 90 days) thyroid panel to include as a minimum TSH and Free T4.

MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

MEDICAL CONDITION		RECOMMENDED EVALUATION DATA
HUMAN IMMUNODEFICIENCY VIRUS (HIV)		
199	Acquired Immunodeficiency Syndrome (AIDS)	Infectious disease consult documenting viral load determination by polymerase chain reaction (PCR), CD4 lymphocyte count, CBC, cognitive function test battery, and LFTs.
200	Human Immunodeficiency Virus (HIV)	Infectious disease consult documenting viral load determination by polymerase chain reaction (PCR), CD4 lymphocyte count, CBC, cognitive function test battery, and LFTs.
ALLERGIES		
201	Angioneurotic Edema or Anaphylaxis	Allergy consult documenting of all allergy history and symptoms along with history of desensitization and immunotherapy treatments. Medical records of previous treatments are also required. <u>Note:</u> Mariners issued waivers for this condition must have injectable epinephrine and diphenhydramine conveniently available.

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Medical Condition in Encl. (3)	Section	Condition # in Encl. (3)
2nd degree AV block mobitz I	Heart	58
2nd degree AV block mobitz II	Heart	59
3rd degree AV block	Heart	60
Abdominal aneurysm	Vascular System	82
Ablation, radio frequency	Heart	62
Abscess, brain	Neurologic	164
Abscess, pulmonary	Lungs & Chest	37
Absence of conjugate alignment	Eyes, General	32
Acoustic neuroma	Ears	8
Acquired immunodeficiency syndrome (AIDS)	Human Immuno-Deficiency Virus (HIV)	199
Acute fibrinous pleurisy	Lungs & Chest	44
Acute hepatitis a, b, or e	Abdomen, Viscera, & Anus	89
Acute hepatitis c	Abdomen, Viscera, & Anus	91
Acute nephritis	Genital-Urinary System	103
Acute or chronic disease of ears that may disturb equilibrium	Ears	5
Acute peripheral vestibulopathy	Neurologic	175
Acute polymyositis	Musculo-Skeletal	126
Addison's disease	Endocrine Disorders	195
Adenopathy secondary to systemic disease or metastasis within the last 5 years	Lymphatics	140
Adjustment disorders	Psychiatric	180
Alzheimer's disease	Neurologic	159
Amnesia	Neurologic	171
Amputations	Musculo-Skeletal	116
Anemia	Blood and Blood-forming Tissue Disease	189
Aneurysm, abdominal or thoracic	Vascular System	82
Aneurysm, intracranial	Neurologic	146
Angina pectoris	Heart	68
Angioneurotic edema, or anaphylaxis	Allergies	201
Ankylosis	Musculo-Skeletal	130
Anti-tachycardia devices or implantable defibrillators	Heart	81
Aortic and/or mitral insufficiency	Heart	73
Arteriosclerotic vascular disease (ASVD), symptomatic	Vascular System	84
Arteriovenous malformation	Neurologic	147

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Medical Condition in Encl. (3)	Section	Condition # in Encl. (3)
Arthritis, osteo	Musculo-Skeletal	124
Arthritis	Musculo-Skeletal	125
Asthma	Lungs & Chest	35
Atherectomy	Heart	70
Atrial fibrillation, chronic	Heart	66
Atrial Fibrillation, Paroxysmal or Lone	Heart	67
Atrophy, progressive, of any muscles	Musculo-Skeletal	117
Attention deficit disorder	Psychiatric	181
Attention deficit hyperactive disorder	Psychiatric	181
Arteriosclerotic vascular disease (ASVD)	Vascular System	84
Back pain, recurrent and symptomatic	Musculo-Skeletal	135
Bacterial meningitis	Neurologic	166
Bereavement disorder	Psychiatric	183
Bipolar disorder	Psychiatric	182
Bladder cancer	Genital-Urinary System	107
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Brain abscess	Neurologic	165
Breast tumors, malignant	Lungs & Chest	48a
Bronchiectasis	Lungs & Chest	51
Bronchitis, chronic	Lungs & Chest	36
Buerger's disease	Vascular System	85
CABG (Coronary Artery Bypass Graft)	Heart	70
Calculus, renal	Genital-Urinary System	113
Calculus, ureteral or vesical	Genital-Urinary System	114
Cancer, bladder	Genital-Urinary System	107
Cancer, colon/colorectal	Abdomen, Viscera, & Anus	94
Cancer, gastrointestinal	Abdomen, Viscera, & Anus	95
Cancer, prostate	Genital-Urinary System	108
Cancer, skin	Skin Diseases	99
Cardiac decompensation or cardiomyopathy	Heart	77
Cardiomyopathy	Heart	77
Central sleep apnea	Neurologic	179
Cerebral palsy	Musculo-Skeletal	132
Cerebral thrombosis	Neurologic	143
Chorioretinitis	Eyes, General	17

INDEX FOR MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

Medical Condition in Encl. (3)	Section	Condition # in Encl. (3)
Chronic atrial fibrillation	Heart	66
Chronic bronchitis	Lungs & Chest	36
Chronic hepatitis b	Abdomen, Viscera, & Anus	90
Chronic hepatitis c	Abdomen, Viscera, & Anus	92
Chronic lymphocytic leukemia	Lymphatics	139
Chronic nephritis	Genital-Urinary System	104
Chronic renal insufficiency or chronic renal failure	Genital-Urinary System	102a
Cirrhosis, alcoholic	Abdomen, Viscera, & Anus	87
Cirrhosis, non-alcoholic	Abdomen, Viscera, & Anus	88
Clinical depression	Psychiatric	184
Collagen vascular diseases	Skin Diseases	97
Coloboma	Eyes, General	17
Colon/colorectal cancer	Abdomen, Viscera, & Anus	94
Congenital heart disease	Heart	78
Congestive heart failure (CHF), hypertrophy or dilatation of the heart	Heart	79
Conjugate alignment, absence of	Eyes, General	32
Convergence, eye	Eyes, General	33
Chronic obstructive pulmonary disease	Lungs & Chest	36
Corneal dystrophy	Eyes, General	18
Corneal ulcer or dystrophy	Eyes, General	18
Creutzfeldt-Jakob's disease, and other slow viral diseases	Neurologic	161
Cushings' Disease or Syndrome	Endocrine Disorders	196
Cysts or tumors of the lung, pleura, or mediastinum	Lungs & Chest	48
Decreased range of motion of a major joint	Musculo-Skeletal	119
Deformities of the face or head	Head, Face, Neck, & Scalp	2
Deformities, either congenital or acquired,	Musculo-Skeletal	118
Dementia	Neurologic	160
Depression	Psychiatric	184
Dermatomyositis	Musculo-Skeletal	127
Diabetes mellitus (DM) requiring Insulin, or history of diabetic ketoacidosis (DKA)	Endocrine Disorders	193
Diabetes mellitus requiring oral medication	Endocrine Disorders	194
Diplopia	Eyes, General	14
Disequilibrium or vertigo	Neurologic	177
Disparity in size or reaction to light (afferent pupillary defect)	Eyes, General	29

INDEX FOR MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

Medical Condition in Encl. (3)	Section	Condition # in Encl. (3)
Disturbance of consciousness	Neurologic	168
Disturbances of musculoskeletal function	Musculo-Skeletal	133
Dizziness or disequilibrium	Ears	10
Drug dependence/abuse	Psychiatric	186
Dysthymic or bereavement disorder	Psychiatric	183
Dystonia musculorum deformans	Neurologic	154
Emphysema	Lungs & Chest	36
Empyema	Lungs & Chest	45
Encephalitis	Neurologic	165
Encephalomyelitis	Neurologic	150
Endocarditis	Heart	80
Episodic disorders of dizziness or disequilibrium	Ears	10
Equilibrium disturbance	Ears	5
Eye, any other acute or chronic pathological condition of either eye or adnexa	Eyes, General	13
Fibrosis, pulmonary	Lungs & Chest	42
Fistula of neck	Head, Face, Neck, & Scalp	1
Fistula, bronchopleural	Lungs & Chest	40
Fistula, mastoid	Ears	6
Gastrointestinal bleeding	Abdomen, Viscera, & Anus	96
Gender reassignment	Genital-Urinary System	115
Genitourinary tract cancer	Genital-Urinary System	107
Gilles de la tourette syndrome	Neurologic	158
Glaucoma	Eyes, General	23
Head trauma	Neurologic	173
Headaches	Neurologic	162
Heart block, 2nd degree AV block mobitz I	Heart	58
Heart block, 2nd degree AV block mobitz II	Heart	59
Heart block, 3rd degree AV block	Heart	60
Heart block, left bundle branch	Heart	53
Heart block, right bundle branch, acquired	Heart	54
Heart transplant	Heart	76
Hemophilia	Blood and Blood-forming Tissue Disease	190
Hemorrhage, intracerebral	Neurologic	144
Hemorrhage, subarachnoid,	Neurologic	144

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Medical Condition in Encl. (3)	Section	Condition # in Encl. (3)
Hepatitis B, chronic,	Abdomen, Viscera, & Anus	90
Hepatitis C, acute	Abdomen, Viscera, & Anus	91
Hepatitis C, chronic	Abdomen, Viscera, & Anus	92
Herniation of intervertebral disc	Musculo-Skeletal	134
Hodgkin's disease lymphoma	Lymphatics	137
Human immunodeficiency virus (HIV)	Human Immuno-Deficiency Virus (HIV)	200
Huntington's disease	Neurologic	155
Hydrocephalus	Neurologic	163
Hydronephrosis	Genital-Urinary System	112
Hypertension	Heart	71
Hyperthyroidism	Endocrine Disorders	198
Hypoglycemia	Endocrine Disorders	197
Impaired hearing	Ears	9
Implantable defibrillators	Heart	81
Implanted pacemaker	Heart	55
Inability to converge eyes on a near object	Eyes, General	33
Intervertebral disc surgery	Musculo-Skeletal	131
Intracerebral or subarachnoid hemorrhage	Neurologic	144
Intracranial aneurysm	Neurologic	146
Intracranial tumor within the last 5 years	Neurologic	148
Labyrinths, nonfunctioning	Neurologic	176
Landry-guillain-barre syndrome	Neurologic	151
Left bundle branch block	Heart	53
Leukemia, acute or chronic	Lymphatics	138
Limitation of motion of a major joint	Musculo-Skeletal	119
Liver transplant	Abdomen, Viscera, & Anus	93
Lobectomy	Lungs & Chest	41
Lupus erythematosus	Musculo-Skeletal	128
Lymphedema	Lymphatics	141
Lymphosarcoma	Lymphatics	142
Macular degeneration	Eyes, General	24
Macular detachment	Eyes, General	25
Stuttering	Mouth & Throat	4
Mastoid fistula	Ears	6

INDEX FOR MEDICAL CONDITIONS SUBJECT TO FURTHER REVIEW

Medical Condition in Encl. (3)	Section	Condition # in Encl. (3)
Mastoiditis, acute or chronic	Ears	7
Meniere's disease	Neurologic	174
Mitral and/or aortic insufficiency	Heart	73
Mobitz I 2nd degree heart block	Heart	58
Mobitz II 2nd degree AV block	Heart	59
Monocular vision	Eyes, General	11
Multiple sclerosis	Neurologic	153
Muscular dystrophy	Musculo-Skeletal	132
Myasthenia gravis	Musculo-Skeletal	132
Myasthenia gravis, pulmonary	Neurologic	152
Mycotic disease	Lungs & Chest	38
Myocardial infarction	Heart	69
Myocarditis	Heart	80
Narcolepsy	Neurologic	179
Kidney neoplasm	Genital-Urinary System	107
Nephritis, acute	Genital-Urinary System	103
Nephritis, chronic	Genital-Urinary System	104
Nephrosis	Genital-Urinary System	105
Neuralgia	Musculo-Skeletal	120
Neuralgia, trigeminal	Neurologic	172
Neurofibromatosis	Skin Diseases	100
Neuroma, acoustic	Ears	8
Neuropathy	Musculo-Skeletal	120
Neurosyphilis	Neurologic	167
Nonfunctioning labyrinths	Neurologic	176
Nystagmus	Eyes, General	30
Obstructive sleep apnea	Lungs & Chest	43
Ophthalmic pathology	Eyes, General	12
Ophthalmic tumors	Eyes, General	26
Optic atrophy	Eyes, General	19
Optic neuritis	Eyes, General	19
Organic mental disorders	Psychiatric	188
Orthostatic hypotension	Neurologic	178
Osteoarthritis	Musculo-Skeletal	124
Osteomyelitis	Musculo-Skeletal	122
Otitis externa	Ears	9
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Medical Condition in Encl. (3)	Section	Condition # in Encl. (3)
Pancreatic tumor	Endocrine Disorders	197
Papilledema	Eyes, General	22
Ophthalmic paralysis	Eyes, General	34
Parkinson's disease	Neurologic	156
Paroxysmal/lonc atrial fibrillation	Heart	67
Periarthritis nodosa	Musculo-Skeletal	129
Pericarditis	Heart	80
Periodic limb movement	Neurologic	179
Peripheral vestibulopathy	Neurologic	175
Pleurisy, acute fibrinous	Lungs & Chest	44
Pleurisy, with effusion	Lungs & Chest	46
Pneumonectomy	Lungs & Chest	47
Pneumothorax	Lungs & Chest	50
Polycystic kidney disease	Genital-Urinary System	109
Polycythemia	Blood and Blood-forming Tissue Disease	192
Polymyositis	Musculo-Skeletal	126
Preexcitation syndrome	Heart	61
Premature atrial contractions	Heart	56
Premature ventricular muscle contractions	Heart	57
Progressive atrophy	Musculo-Skeletal	117
Prostate cancer	Genital-Urinary System	108
Pseudotumor cerebri	Neurologic	149
Psychotic disorder	Psychiatric	185
Percutaneous transluminal coronary arterioplasty	Heart	70
Pterygium	Eyes, General	15
Pulmonary fibrosis	Lungs & Chest	42
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ABBREVIATIONS

NVIC Abbreviation	Definition
2-D M-mode	Two-dimensional, motion-mode doppler echocardiography
AB	Able-bodied seaman
ACE	Angiotensin converting enzyme
AIDS	Acquired immunodeficiency syndrome
ANA	Anti-nuclear antibody
AO	American Optometry
ASAM	American Society of Addiction Medicine
AV	Atrioventricular
BP	Blood pressure
BPM	Beats per minute
BUN	Blood urea nitrogen
Ca	Calcium
CABG	Coronary artery bypass graft
CAD	Coronary artery disease
CBC	Complete blood count
CD4	Cluster of differentiation 4 (white blood cells)
CEA	Carcino embryonic antigen
CFR	Code of Federal Regulations
CHF	Congestive heart failure
CG	Coast Guard
cm	Centimeter
COX-2	Cyclooxygenase -2
CT	Computed tomography
CVA	Cerebrovascular accident
CXR	Chest X-ray
DKA	Diabetic ketoacidosis
DLCO	Diffusing capacity of the lung for carbon monoxide
DM	Diabetes mellitus
DNA	Deoxyribonucleic acid
DOT	Department of Transportation
DSM-4	Diagnostic & Statistical Manual,
ECG	Electrocardiogram
EEG	Electroencephalogram
EKG	Electrocardiogram
FEV1	Forced expiratory lung volume in one second
FH	Food handler

ABBREVIATIONS

NVIC Abbreviation	Definition
Free T4	Free thyroxine immunoassay
FVC	Forced vital capacity
GFR	Glomerulo filtration rate
GMDSS	Global Maritime Distress & Safety System
GRT	Gross register tons
GTT	Glucose tolerance test
GXT	Graded exercise test
HBeAg	Hepatitis B e antigen
HBsAb	Hepatitis B surface antibody
HDL	High density lipoprotein
Hg A1c	Glycosylated hemoglobin
HIV	Human Immunodeficiency Virus
HLA B 27	Histocompatibility lymphocyte antigen test
HR	Heart rate
HTN	Hypertension
IOP	Intraocular pressure
LDL	Low density lipoprotein
LFT	Liver function test
LTI	Latent tuberculosis infection
METS	Metabolic exercise test score
MMC	Merchant mariner's credential
MMD	Merchant mariner's document
MRA	Magnetic resonance angiogram
MRI	Magnetic resonance imaging
NMC	National Maritime Center
NPC	Near point of conversion
NSAID	Non-steroidal anti-inflammatory drug
NVIC	Navigation & Vessel Inspection Circular
OCMI	Officer in Charge, Marine Inspection
OS	Ordinary seaman
OTC	Over-the-counter
PCR	Polymerase chain reaction
PFT	Pulmonary function test
PIC	Person-in-charge
PO4	Phosphorus
PPD	Purified protein derivative
PPE	Personal protective equipment

ABBREVIATIONS

NVIC Abbreviation	Definition
PSG	Polysomnography
PTCA	Percutaneous transluminal coronary arterioplasty
PVC	Premature ventricular contraction
QMED	Qualified member of engineering department
RAT	Read aloud test
REC	Regional Exam Center
RFPEW	Rating forming part of an engineering watch
RFPNW	Rating forming part of a navigational watch
RNA	Ribonucleic acid
SAP	Substance abuse provider
STCW	Standards of Training, Certification, and Watchkeeping
STFH	Steward's department food handler
TIBC	Total iron-binding capacity
TNM	T = untreated primary tumor. N = regional lymph node. M = distant metastases.
TSH	Thyroid stimulating hormone
UA	Urinalysis
VTA	Vision testing apparatus

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MEDICATIONS

A. Definitions.

1. *Acting under the authority of the credential.*
 - a. The definition of “acting under the authority of a credential” is found in 46 CFR 5.57. It states, in part, that “*A person employed in the service of a vessel is considered to be acting under the authority of a credential or endorsement when the holding of such credential or endorsement is:*
 - (1) Required by law or regulation; or
 - (2) Required by an employer as a condition for employment.
 - b. For the purposes of this Enclosure, the definition of “acting under the authority of the credential” will be limited to indicate those times when the mariner is on the vessel, even when off-watch or while asleep; or is otherwise subject to recall for duty or emergency response.
2. *Alcohol* means any form or derivative of ethyl alcohol (ethanol). See 33 CFR 95.010.
3. *Controlled substance* has the same meaning assigned by 21 U.S.C. 802 and includes all substances listed on Schedules I through V as they may be revised from time to time (21 CFR Part 1308). See 33 CFR 95.010.
4. *Drug* means any substance (other than alcohol) that has known mind or function-altering effects on a person, specifically including any psychoactive substance, and including, but not limited to, controlled substances. See 33 CFR 95.010.
5. *Intoxicant* means any form of alcohol, drug or combination thereof. See 33 CFR 95.010.

B. Prohibitions.

1. Illegal Substances: Use of illegal or illegally obtained substances, including all illegal or illegally obtained dangerous drugs (as defined in 46 CFR 16.105), is incompatible with maritime service and will not be waived under any circumstances.
2. Intoxicants: Operation of vessels while under the influence of drugs or alcohol is regulated under 33 CFR Part 95. Issuance of a credential does not authorize a mariner to operate a vessel contrary to the provisions in 33 CFR Part 95. *See also* 46 USC § 2302.

C. Important Safety Warning.

Certain medications, whether prescription or over-the-counter, have known impairing effects and their labels warn about risk of drowsiness and caution against use while driving or operating hazardous machinery.

The nature of shipboard life and shipboard operations is such that mariners may be subject to unexpected or emergency response duties associated with vessel, crew, or passenger safety, prevention of pollution and maritime security at any time while aboard a vessel.

In the interest of safety of life and property at sea, the Coast Guard views shipboard life and the attendant shipboard duties that can arise without warning, as safety sensitive duties that are analogous to operating hazardous machinery. As such:

1. Mariners are advised to discuss all medication use with their treating providers and to inform them of the safety sensitive nature of their credential; and
2. Mariners are cautioned against acting under the authority of their credential while under the influence of medications that:
 - a. can cause drowsiness, or
 - b. can impair cognitive ability, judgment or reaction time, or
 - c. carry warnings that caution against driving or operating heavy machinery.
3. Mariners are advised that they are considered to be acting under the authority of the credential, for the purposes of this Enclosure, anytime they are aboard a vessel in a situation to which 46 CFR 5.57(a) applies, even when off-watch or while asleep, or any time they are subject to recall for duty or emergency response.

D. Disclosure of Prescription and Over-the-Counter Medications.

Applicants who are required to complete a general medical exam should disclose on the Application for Merchant Mariner Medical Certificate, Form CG-719K, all prescription medications, filled or taken within 30 days prior to the date that the applicant signs the application to the Coast Guard. 46 CFR 10.302(a) and 10.304(a).

In addition, applicants who are required to complete a general medical exam should disclose on the Application for Merchant Mariner Medical Certificate, Form CG-719K all prescription medications and over-the-counter medications, including dietary supplements and vitamins, that were used for a period of 30 days or more within the 90 days prior to the date the applicant signs the application to the Coast Guard. 46 CFR 10.302(a) and 10.304(a).

E. Recommended Evaluation Data for Medications.

1. Applicants seeking medical certification should provide amplifying information for all prescription and over-the-counter medications, filled or taken within 30 days prior to the date that the applicant submits the Application for Merchant Mariner Medical Certificate, Form CG-719K to the Coast Guard.
2. The amplifying information should include, at a minimum:
 - a. The medical condition that is being treated by the medication,
 - b. The dose of the medication (the amount of medication taken and how often the medication is taken), and

- c. For prescription medications, documentation from the treatment provider on the medication dose and frequency, the status and stability of the underlying condition, and any precautions provided to the mariner regarding the medication or the condition.
3. The amplifying information will be reviewed to determine whether the medication and/or underlying condition:
 - a. are approved for use without a waiver,
 - b. are approved for issuance of a waiver, or
 - c. pose such a risk that the mariner will not be approved for medical certification.
4. See Enclosure (6) of this NVIC for additional information on the medical review process.

F. Medication Waivers – General Information.

1. Mariners using certain medications will require a waiver if the medication, or the manner in which the medication is used, has the potential to pose significant risk of impairment or other safety concerns.
2. In general, medication waivers are likely to be approved when circumstances indicate that there is no significant risk to maritime and public safety. For instance, if a mariner regularly uses a medication that causes drowsiness, however, objective documentation supports that the mariner does not work while using the medication and will not be under the influence of the medication while working, then the mariner's use of the medication may be considered favorably for a waiver.
3. Medication waivers may be granted with specific conditions to which the applicant must adhere, such as more frequent monitoring of the medication/associated medical condition(s), submission of medical exams and/or tests at varying intervals to track the ongoing status of the medical condition, or operational limitations or restrictions in the manner the mariner may serve under the MMC.
4. Any operational limitations or restrictions will be reflected on the medical certificate, and may include restriction of route or trade.
5. Medication waivers are generally not approved for use of legally prescribed controlled substances while acting under the authority of the credential. Legally prescribed controlled substances include, but are not limited to, opioid /opiate medications, benzodiazepine medications, non-benzodiazepine sedative hypnotic medications, and barbiturate medications. Further guidance on these medications is provided in Sections I and J of this enclosure.
6. The Coast Guard retains final authority for the issuance of medical waivers.

G. Medications Subject to Further Review due to Risk of Impaired Cognitive Ability, Judgment, or Reaction Time.

Medications that may impair cognitive ability, judgment, or reaction time, may be considered disqualifying for issuance of a medical certificate. 46 CFR 10.304(a). Additionally, the underlying condition requiring use of the potentially impairing medication and/or the possible side effects of these medications may result in denial of an application. Mariners and applicants who require the use of potentially impairing medications may seek consideration for a waiver in accordance with 46 CFR 10.303.

The following is a non-exhaustive list of medications that may be deemed disqualifying due to risk of impaired cognitive ability, judgment or reaction time. Mariners who use these medications are subject to further medical review to determine whether their use of the medication is likely to impair their ability to operate safely. If the mariner's medication use is deemed disqualifying by the Coast Guard, then the Coast Guard will determine whether the mariner qualifies for a waiver under 46 CFR 10.303. Please refer to the sections E (Recommended Evaluation Data for Medications) and I (Medication Waivers Requiring Special Consideration).

1. Anti-depressants (Medicines for treatment of Depression): Examples include, but are not limited to, citalopram (Celexa), duloxetine (Cymbalta), paroxetine (Paxil), trazodone (Desyrel), amitriptyline (Elavil) and venlafaxine (Effexor). In many cases, use of anti-depressant medications may be approved without need for a waiver. The medication and the underlying condition will be reviewed to determine whether the mariner qualifies for a waiver under 46 CFR 10.303.
2. Anti-Motion Sickness Agents (Medicines for treatment of motion sickness): Intermittent use of these medications does not require a waiver; however, mariners are cautioned against acting under the authority of the credential while under the influence of anti-motion sickness agents that can cause drowsiness or impairment, or that carry warnings that caution against driving or operating heavy machinery.
3. Antipsychotics: Examples include, but are not limited to, aripiprazole (Abilify), olanzapine (Zyprexa), quetiapine (Seroquel), lurasidone (Latuda), and risperidone (Risperdal). The medication and the underlying condition will be reviewed to determine whether the mariner qualifies for a waiver under 46 CFR 10.303.
4. Anti-Convulsives, Anti Epileptic Drugs (Medications for treatment of seizures): The medication and the underlying condition will be reviewed to determine whether the mariner qualifies for a waiver under 46 CFR 10.303. See enclosure (8) for guidance on evaluating waivers of underlying conditions that may require use of anti-convulsive or anti-epileptic medications.

5. Anti-Histamines, Allergy Medications:
 - a. Non-sedating medications (medications without significant risk of drowsiness). Examples include loratadine (Claritin), fexofenadine (Allegra) and desloratadine (Clarinex). Use of non-sedating anti-histamines does not require a waiver.
 - b. Sedating medications (medications with significant risk of drowsiness, sleepiness) - Examples include but are not limited to diphenhydramine (Benadryl, ClearQuil Nighttime Allergy Relief), cetirizine (Zyrtec), and doxylamine (Aldex AN, Clearquil Nighttime Sinus and Congestion Relief). For chronic or regular use, the medication and the underlying condition will be reviewed to determine whether the mariner qualifies for a waiver under 46 CFR 10.303. Intermittent use of these medications does not require a waiver; however mariners are cautioned against acting under the authority of the credential while under the influence of anti- histamines (allergy medications) that can cause drowsiness or impairment, or that carry warnings that caution against driving or operating heavy machinery.
6. Barbiturate Medications: Examples include, but are not limited to, butalbital (Fiorinal or Fioricet) and phenobarbital. Due to the risk of impaired cognitive ability, judgment, and reaction time, use of barbiturate medications is disqualifying. The medication and the underlying condition will be reviewed to determine whether the mariner qualifies for a waiver under 46 CFR 10.303. Waivers for use within 48 hours prior to, or while acting under the authority of the credential will only be approved on a case-by-case basis if the Coast Guard determines that there are exceptional circumstances that mitigate risk to public safety. See section I (Medication Waivers Requiring Special Consideration) of this enclosure.
7. Benzodiazepine Medications: Examples include, but are not limited to, alprazolam (Xanax), lorazepam (Ativan), clonazepam (Klonopin) and diazepam (Valium). Due to the risk of impaired cognitive ability, judgment, and reaction time, use of benzodiazepine medications is disqualifying. The medication and the underlying condition will be reviewed to determine whether the mariner qualifies for a waiver under 46 CFR 10.303. Waivers for use within 48 hours prior to, or while acting under the authority of the credential will only be approved on a case-by-case basis if the Coast Guard determines that there are exceptional circumstances that mitigate risk to public safety. See section I (Medication Waivers Requiring Special Consideration) of this enclosure.
8. Cough and Cold Medicines:
 - a. A number of over-the-counter cough and cold preparations contain sedating anti-histamines or other medicines that can cause drowsiness. Intermittent use of these medications does not require a waiver; however mariners are cautioned against acting under the authority of the credential while under the influence of cough or cold medications that can cause drowsiness or impairment, or that carry warnings that caution against driving or operating heavy machinery.

- b. For prescription medications containing opioid or opiate ingredients (such as cough syrups containing codeine or hydrocodone) see section G.11 (Legally Prescribed Controlled Substances) of this NVIC.
9. Stimulant Medications: Examples include, but are not limited to, modafinil, methylphenidate, and amphetamine. The medication and the underlying condition will be reviewed to determine whether the mariner qualifies for a waiver under 46 CFR 10.303.
10. Sleep Aids (Medications to help people fall asleep):
 - a. Over-the-counter medications to help with sleep include, but are not limited to, diphenhydramine (Benadryl, Somnax, Tylenol PM, Compoz Nighttime Sleep Aid, ZZZQuil) and doxylamine (Unisom). Mariners are cautioned against acting under the authority of the credential while under the influence of sleep medications that can cause drowsiness or impairment, or that carry warnings that caution against driving or operating heavy machinery.
 - b. Prescription sleep medications and non-benzodiazepine sedative hypnotic medications: Examples include, but are not limited to zolpidem (Ambien, Intermezzo, Zolpimist), eszopiclone (Lunesta), and zaleplon (Sonata). Due to the risk of impaired cognitive ability, judgment, and reaction time, use of non-benzodiazepine sedative hypnotic medications is disqualifying. The medication and the underlying condition will be reviewed to determine whether the mariner qualifies for a waiver under 46 CFR 10.303. Waivers for use within 12 hours prior to, or while acting under the authority of the credential will only be approved on a case-by-case basis if the Coast Guard determines that there are exceptional circumstances that mitigate risk to public safety. See section I (Medication Waivers Requiring Special Consideration) of this enclosure.
11. Legally Prescribed Controlled Substances: Examples include, but are not limited to, opiate and opioid pain medication such as Tylenol with codeine, oxycodone (Percocet), hydrocodone (Vicodin), hydromorphone (Dilaudid), tramadol (Ultram), methadone, and buprenorphine (Suboxone). Due to the risk of impaired cognitive ability, judgment, and reaction time, use of legally prescribed controlled substances is disqualifying. The medication and the underlying condition will be reviewed to determine whether the mariner qualifies for a waiver under 46 CFR 10.303. Waivers for use within 12 hours prior to, or while acting under the authority of the credential will only be approved on a case-by-case basis if the Coast Guard determines that there are exceptional circumstances that mitigate risk to public safety. See section I (Medication Waivers Requiring Special Consideration) of this enclosure.
12. Medical Use of Hallucinogens: Examples include, but are not limited to, medical marijuana (use of the marijuana plant), nabilin, nabiximols (Sativex), tetrahydrocannabinol, dronabinol (Marinol), Epidiolex, peyote or ecstasy. Even if legalized by a state, use of these substances is disqualifying and will **not** be waived under any circumstances.

13. **Muscle Relaxants:** Examples include but are not limited to carisoprodol (Soma), cyclobenzaprine (Flexeril), and methocarbamol (Robaxin). The medication and the underlying condition will be reviewed to determine whether the mariner qualifies for a waiver under 46 CFR 10.303. Waivers for use within 12 hours prior to, or while acting under the authority of the credential will only be approved on a case-by-case basis if the Coast Guard determines that there are exceptional circumstances that mitigate risk to public safety. See section I (Medication Waivers Requiring Special Consideration) of this enclosure.

H. Medications Subject to Further Review due to Risk of Other Impairment and Safety Concerns.

While many medications can be an important factor in enabling mariners to continue to work at sea; some have side effects that can affect safe and effective performance of routine and emergency duties and some have other complications that will increase the likelihood of illness at sea.

1. Medications that may impair a mariner's ability to perform routine and emergency duties:
 - a. Central nervous system depressants and/or stimulants
 - b. Agents that increase the likelihood of sudden incapacitation
 - c. Medications that impair vision.
2. Medications that may have serious adverse consequences for the user while underway, and may require limitations:
 - a. Medications that can cause prolonged bleeding, either spontaneous or traumatic. Individual risk assessment of bleeding likelihood may be needed;
 - b. Dangers from cessation of medication use;
 - c. Long-term or periodic need for antibiotics and other anti-infection agents;
 - d. Anti-metabolites and cancer treatments; or
 - e. Medications supplied for use at individual discretion.
3. Medications that may require periodic medical monitoring.

I. Medication Waivers Requiring Special Consideration.

1. As stated previously, medications that may impair cognitive ability, judgment or reaction time are considered disqualifying for issuance of credentials. The underlying condition, as well as the effects of the medications, may lead to denial of a medical certificate or may result in issuance of a waiver.

2. Due to the documented risks of impaired cognition, judgment and reaction time associated with the use of legally prescribed controlled substances, including, but not limited to, opioid /opiate medications, benzodiazepine medications, non-benzodiazepine sedative hypnotic medications, and barbiturate medications, the Coast Guard has determined that **use of these medications while acting under the authority of the credential generally will not be waived**. However, waivers may be considered, on a case-by-case basis, if the Coast Guard determines that there are **exceptional** circumstances that warrant consideration for a waiver.
3. Exceptional Circumstances. The criteria for waiver consideration for applicants seeking to use, or be under influence of, medications that may impair cognitive ability, judgment, or reaction time while acting under the authority of the credential are listed below. Applicants unable to meet all of the criteria will only be considered for a waiver under **extraordinary** circumstances if the Coast Guard deems the risk of impairment to be sufficiently low.
 - a. The mariner was previously granted a waiver allowing use of the same medication while working under the authority of the credential, where the credential was of the same scope of authority.
 - b. The mariner demonstrated compliance with all terms of the prior waiver.
 - c. There were no accidents or other safety concerns related to medication, judgment, cognitive ability or reaction time, during the course of the prior waiver period(s).
 - d. The mariner has been on a stable medication regimen for a minimum of two years, as documented by the treating physician and pharmacy records.
 - (1) Mariners who have required periodic increases in medication dosing during the preceding 2-year period would not meet this criterion.
 - (2) Mariners who have consistently or periodically supplemented their medication regimen with other disqualifying medications during the 2-year period, are not likely to be considered as meeting this criterion. For example, an individual who has been on a stable dose of one opioid pain medication for 2 years, but has also periodically taken or filled prescriptions for an opioid cough medication during that same time period, would not be considered as being on a stable dose of medicine.
 - (3) Mariners whose medication dose has been decreased or tapered off, without subsequent dose increase, may be considered as meeting this criterion.
 - e. The mariner is not seeking to use, or be under the influence of, more than one medication with risk for impairment while working under the authority of the credential.
 - f. The mariner's treating physician provides written assessment that adequately addresses all information requested in Section J.1 of this enclosure and that supports a determination that the mariner is at low risk for medication impairment based upon objective testing and standard evaluation tools.

- g. When requested, formal neuropsychological/neurocognitive testing, performed as outlined in Section J.2 of this enclosure, documents the absence of significant medication impairment.
 - h. The mariner does not use any other medications or have any other medical conditions, which may alone, or in combination, adversely affect the mariner's fitness
 - i. Use of methadone may not be waived under any circumstances.
- 4. The risk presented by the mariner's position may be considered in determining whether to grant a waiver. Because of the wide-range of operational conditions, it is impossible to set out in advance which positions may be suitable for a waiver.
 - 5. The Coast Guard retains final authority for the issuance of waivers.
 - 6. Waivers may include restrictions and/or operational limitations on the credential.

J. Recommended Evaluation Data for Medication Waivers Requiring Special Consideration.

Applicants seeking consideration for a medication waiver for the use of medications that may impair cognitive ability, judgment, or reaction time while acting under the authority of the credential should submit the additional information detailed below, for each medication:

- 1. A letter from the prescribing and/or treating physician that includes the following:
 - a. Whether the physician has familiarized him/herself with the detailed guidelines on medical conditions and medications contained in NVIC 04-08.
 - b. Whether the physician understands the safety-sensitive nature of the credential and the specialized shipboard environment.
 - c. A detailed discussion of the condition that requires the use of the potentially impairing medication.
 - d. A description of any known complications experienced by the mariner from the use of a particular medication, level of current stability and prognosis of the underlying condition. The physician should also provide his or her professional opinion on whether the condition is suitable for safety-sensitive work.
 - e. A description of the dosage and frequency of use of the medication (this description should be very specific; "as needed" is not sufficient information). The description should also reflect that the physician has reviewed the mariner's pharmacy records for documentation of the number of pills dispensed for use each month and documentation of the length of time that mariner has been on the medication.

- f. A detailed statement about whether the mariner is taking the medication as directed, and if there are any concerns of misuse or overuse of the medication.
 - g. A statement about whether the mariner is compliant with therapy and follow-up appointments.
 - h. A statement about whether the mariner requires use of this medication while at work, or while aboard the vessel. If the mariner requires use of the potentially impairing medication while at work or while aboard the vessel, the physician should provide a detailed explanation and rationale for the use.
 - i. A statement about whether the physician has advised the mariner of the risks of impairment related to the medication. The physician should also discuss any risks advised, as well as any instructions discussed with the mariner for mitigating risk.
 - j. A statement about whether the mariner's other medications, medical conditions, and work/sleep conditions might compound the impairing effects of this medication. This discussion should reflect that the physician has knowledge of the specifics of the mariner's medications, medical conditions and work/sleep schedule.
 - k. A statement about whether the physician has formally evaluated the mariner for the presence of any impairing medication effects. This discussion should include a description of the method of evaluation utilized, as well as the findings.
 - l. A medical opinion of whether the mariner has any medication effects that would impede safe operation of a vessel or interfere with work in a safety sensitive position. This discussion should include the rationale for the physician's opinion.
 - m. A statement whether the physician has advised the mariner that it is safe to operate a vessel, operate hazardous machinery and perform safety sensitive functions while under the influence of this medication.
2. When specifically requested by the reviewing authority, additional amplifying information, to include formal neuropsychological/neurocognitive evaluation.
- a. In particular, mariners seeking waivers to use or be under the influence of potentially impairing opioid /opiate, benzodiazepine, sedative hypnotic, and/or barbiturate medications, while acting under the authority of the credential, may be asked to submit the results of a formal neuropsychological/neurocognitive evaluation.
 - b. The Coast Guard will not normally request neuropsychological/neurocognitive testing unless the applicant meets all other requirements for waiver consideration. This is to prevent mariners from undergoing costly testing when issuance of a waiver is unlikely.
 - c. Mariners are advised that submission of neuropsychological/neurocognitive testing results does not guarantee issuance of a waiver.

- d. When formal neuropsychological/neurocognitive evaluation is requested, the assessment should include objective evaluation of the following functions, at a minimum¹:
 - (1) Alertness, arousal and vigilance;
 - (2) Attention (focused, shifting and divided), processing speed, and working memory;
 - (3) Reaction time (choice and complex), psychomotor function, upper motor speed and coordination;
 - (4) Sensory perceptual function;
 - (5) Executive function: mental flexibility, adaptive problem solving, abstract reasoning, impulse control, risk taking/risk assessment, organizational ability (including visual spatial organization), and planning;
 - (6) Memory; and
 - (7) Communication skills.

- e. When formal neuropsychological/neurocognitive evaluation is requested, the evaluation and narrative interpretation must be provided by a neuropsychologist who is board-certified and licensed in the United States.

- f. The report of formal neuropsychological/neurocognitive evaluation should also include:
 - (1) Documentation of witnessed administration of the medication in question by a licensed medical provider.
 - (2) Documentation of the time interval between ingestion of the medication and administration of the neuropsychological/neurocognitive testing battery.

¹ Kay, GG and Logan BK, (2001). Drugged Driving Expert Panel report: A consensus protocol for assessing the potential of drugs to impair driving. (DOT HS 811 438). Washington, DC: National Highway Traffic Safety Administration.

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VISION AND HEARING STANDARDS

1. VISION REQUIREMENTS FOR LICENSED OR CERTIFICATED DECK PERSONNEL

- a. Applicants for any deck officer license or qualified deck rating should demonstrate that they have correctable vision to at least 20/40 in each eye and uncorrected vision of at least 20/200 in each eye.¹ Applicants for STCW endorsements should meet the same standards. In all cases, the horizontal field of vision should be not less than 100 degrees in each eye. Waivers are not normally granted to an applicant whose corrected vision in the better eye is not at least 20/40. Additional waiver information is contained in paragraph 4 below. *See* 46 CFR 10.205(d)(2) & (d)(4).
- b. These applicants must demonstrate that they have a normal color sense when tested by the 14 plate (which replaces the obsolete 16 plate), 24 plate, or 38 plate Ishihara pseudoisochromatic plates tests, Farnsworth Lantern, or an alternative test approved by the NMC. The use of color sensing lenses to assist these applicants with passing the color vision test is prohibited by 46 CFR 10.205(d)(2). Any questions about acceptable color sense testing methodologies should be directed to the NMC. *See* 46 CFR 10.205(d)(2).

2. VISION REQUIREMENTS FOR LICENSED OR CERTIFICATED ENGINEERING PERSONNEL, TANKERMAN, OFFSHORE INSTALLATION MANAGER, BARGE SUPERVISOR, BALLAST CONTROL OFFICER AND RADIO OFFICER

- a. Applicants for any engineering officer license, qualified engineering rating, offshore installation manager, barge supervisor, ballast control officer, radio officer, or tankerman endorsement should demonstrate that they have correctable vision of at least 20/50 in each eye and uncorrected vision of at least 20/200 in each eye.² Applicants for STCW endorsements as RFPEW, or for any STCW engineering officer endorsement, should meet the same standards. The horizontal field of vision should be not less than 100 degrees in each eye. Waivers are not normally granted to an applicant whose corrected vision in the better eye is not at least 20/50. Additional waiver information is contained in paragraph 4 below. *See* 46 CFR 10.205(d)(3) & (d)(4).
- b. These applicants are only required to demonstrate that they can distinguish between the colors red, blue, green, and yellow. They may do so by passing the 14 plate (which replaces the obsolete 16 plate), 24 plate, or 38 plate Ishihara pseudoisochromatic plates

¹ The Coast Guard has proposed changing its current vision standards currently in 46 CFR 10.205(b). The proposed change would require that applicants meet the current vision acuity standard (20/40 corrected vision, 20/200 uncorrected vision) in one eye only rather than both eyes. *See* 72 FR 3605, 3656 (Jan. 2007) Proposed 46 CFR 10.215(b)(1) would require: "An applicant must have correctable vision to at least 20/40 in one eye and uncorrected vision of at least 20/200 in the same eye." If proposed 46 CFR 10.215(b)(1) becomes a final, effective rule, these vision standards would become the vision standards for this document at that time.

² The Coast Guard has proposed changing its vision standards currently in 46 CFR 10.205(b). The proposed change would require that applicants meet the current vision acuity standard (20/50 corrected vision, 20/200 uncorrected vision) in one eye only rather than both eyes. *See* 72 FR 3605, 3656 (Jan. 2007). Proposed 46 CFR 10.215(b)(2) would require: "An applicant must have correctable vision to at least 20/50 in one eye and uncorrected vision of at least 20/200 in the same eye" If proposed 46 CFR 10.215(b)(2) becomes a final, effective rule, these vision standards would become the vision standards for this document at that time.

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tests, Farnsworth Lantern, or an alternative test approved by the NMC. Any questions about acceptable color-sense testing methodologies should be directed to the NMC. *See* 46 CFR 10.205(d)(3).

3. GREAT LAKES PILOTS VISION STANDARDS

The vision standards for an applicant for original registration and for registered pilots are contained in 46 CFR 402.210(c). An applicant for original registration must have a visual acuity either with or without glasses of at least 20/20 vision in one eye and at least 20/40 in the other. An applicant who wears glasses or contact lenses must also pass a test without glasses or lens of at least 20/40 in one eye and at least 20/70 in the other.

Registered pilots, however, must have either with or without glasses or lens visual acuity of at least 20/30 in one eye and at least 20/50 in the other. A Registered Pilot who wears glasses or lens must also pass a test without glasses or lens of at least 20/50 in one eye and at least 20/100 in the other. The color sense of original applicants and Registered Pilots shall be tested by a pseudoisochromatic plate test. Passage of the Williams lantern test or its equivalent is an acceptable substitute for a pseudoisochromatic plate test. *See* 46 CFR 402.210(c).

4. WAIVERS OF VISION REQUIREMENTS

- a. Applicants for any credential (original, renewal, or raise in grade) with compensated monocular vision may be granted a waiver by the NMC provided the vision in the applicant's remaining eye is correctable to the applicable standards in either section 1 or 2 above. An applicant for an original credential should also provide evidence of the ability to compensate for the lack of stereo vision through a report from an ophthalmologist and attestations of the applicant's ability from employers or co-workers. Generally, waivers for monocular vision are not granted until the applicant has been subject to monocular vision for at least 180 days.
- b. Applicants with uncorrected vision of up to 20/800 may be granted a waiver by the Coast Guard provided that the corrected vision meets the applicable standards set forth in paragraph 1 or 2 above. The waiver endorsement should include a requirement that the applicant carry spare corrective lenses and wear the corrective lenses when acting under the authority of the credential.
- c. Applicants for Able Seaman (AB) endorsement who cannot demonstrate normal color vision by passing the 14 plate, 24 plate, or 38 plate Ishihara pseudoisochromatic plates tests, Farnsworth Lantern, or an alternative test approved by the NMC, but who are otherwise qualified for AB in all respects, may be issued an MMD endorsed as boatswain. The term "boatswain" is defined in 46 CFR 10.103. It is a non-watchstanding, non-navigating position.

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- d. Applicants for deck officer licenses who cannot pass the color vision tests may be considered for a waiver by the NMC for issuance of a license limited to daylight hours only.
- e. Waivers are not normally granted for conditions that accelerate the normal decline in vision from aging.

5. HEARING STANDARDS

- a. Applicants for any credential (original, renewal or raise in grade) should have adequate hearing.
- b. If the examining medical practitioner has concerns regarding the applicant's ability to adequately hear, the examining medical practitioner should refer the applicant to an audiologist or other hearing specialist to conduct an audiometer test and/or a speech discrimination test. Applicants should advise medical practitioners of any auditory concerns that they are aware of at the time of the medical examination, and they may submit the results of hearing tests conducted prior to the medical examination as long as the test results will be no more than 12 months old on the date of credential application. The documented results of the test(s) should be provided to the examining medical practitioner for review and attached to the completed credential application.
- c. The audiometer test should include testing at the following thresholds: 500 Hz; 1,000 Hz; 2,000 Hz; and 3,000 Hz. The frequency responses for each ear are averaged to determine the measure of an applicant's hearing ability. Applicants should demonstrate an unaided threshold of 30 decibels or less in their best ear. If the applicant only has hearing in one ear, the unaided threshold should be 30 decibels or less in that ear.
- d. The functional speech discrimination test is carried out at a level of 55 decibels. For issuance of an original license, qualification, or certificate the applicant should demonstrate functional speech discrimination of at least 90%. For renewal or raise in grade of any credential, the applicant should demonstrate functional speech discrimination of at least 80%. An applicant who is unable to meet the standards of the audiometer test, but who can pass the functional speech discrimination test, may be eligible for a waiver.
- e. A hearing aid may be used by applicants for an original, renewal, or upgrade of any credential. When a hearing aid is used, the aided threshold should be at least 20 decibels in each ear and functional speech discrimination should be at least 90% at 55 decibels. An applicant who requires the use of a hearing aid to meet the hearing standards should have a notation of that fact on his or her credential(s) along with a requirement that spare batteries are to be available, and that the applicant must use the hearing aid in an operational mode while acting under the authority of the credential.

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MEDICAL REVIEW PROCESS

- A. The medical review process is used to determine if a mariner meets the medical and physical standards for a credential as contained in references (a) through (c).
- B. When individuals submit their application for a medical certificate, the Coast Guard will thoroughly review the application to determine if the applicant has any of the medical conditions listed in enclosure (3) and any other conditions that may create a risk of sudden incapacitation or debilitating complication. See 46 CFR 10.304. The Coast Guard will advise the applicant if there are any discrepancies or if any additional information is needed. Mariners should then schedule additional appointments, receive test results, or meet other requirements as soon as possible to prevent unnecessary delays. See 46 CFR 10.303(a).
- C. The NMC will reevaluate all medical and physical conditions requiring further review (see enclosure (3)) prior to making a fitness determination. The NMC will consider the applicant's completed application, as well as all supporting documentation in making a decision whether to issue a medical certificate.
- D. The NMC will review all information provided, and will make one of the determinations found in 46 CFR 10.301(a). The Coast Guard will inform the applicant of the results of their review.
 - 1. The Coast Guard will issue a medical certificate if the mariner is qualified. See Guidance on the Issuance of Medical Certificates, NVIC 01-14, COMDTPUB 16721 for more detail on the review process.
 - 2. If issuance of a medical certificate is denied due to a determination that the applicant is not physically and/or medically qualified, the applicant will be informed in writing of the cause and advised that:
 - a. Under 46 CFR 1.03-40 and 46 CFR 1.03-15, the applicant may seek reconsideration of the denial of medical certification within 30 days of the date of the denial; and
 - b. The applicant may subsequently appeal the reconsideration decision within 30 days of the date of the decision. The Coast Guard may extend the 30-day time limit to file an appeal upon a showing of good cause.
- E. Deterioration of a waived medical condition and/or failure to comply with any operational limitations and/or restrictions placed on the medical certificate may result in permanent loss of medical certification. Additionally, appropriate administrative action, up to and including suspension or revocation of the mariner's credential(s) in accordance with 46 CFR Part 5, may result.

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MEDICAL WAIVERS FOR APPLICANTS WITH ANTI-TACHYCARDIA DEVICES OR IMPLANTABLE CARDIOVERTER DEFIBRILLATORS (ICD)

Merchant mariner credential applicants with anti-tachycardia devices or implantable cardioverter defibrillators are generally not qualified for officer or rating endorsements. For applicants with these devices, the underlying condition usually poses an inordinate risk of sudden incapacitation. In some very exceptional circumstances, when the underlying condition has improved and stabilized sufficiently, a waiver may be issued. The criteria below are to be used in assessing whether an applicant's underlying condition has improved sufficiently to warrant granting a waiver. A mariner who meets all of the below criteria will normally be considered for a waiver without operational limitations on their credential. Mariners who meet most, but not all of the criteria may be considered for a waiver under exceptional circumstances if the risk of sudden incapacitation is deemed sufficiently low. The risk presented by the mariner's position may be considered in determining whether to grant a waiver. Because of the wide-range of operational conditions, it is impossible to set out in advance which positions may be suitable for a waiver.

In cases of applicants with multiple conditions, care must be taken to consider the impact the applicant's other medical conditions have on their suitability for a waiver for ICDs or anti-tachycardia devices.

- (1) The applicant does not have a diagnosis of a cardiac channelopathy affecting the electrical conduction of the heart (to include Brugada syndrome, Long QT syndrome, etc.).
- (2) The applicant does not have a prior history of ventricular fibrillation or episodes of sustained ventricular tachycardia within the last three years.
- (3) The ICD or anti-tachycardia device was implanted more than three years ago.
- (4) The ICD has not fired nor has the applicant required anti-tachycardia pacing therapy within the last three years.
- (5) There are no additional risk factors for inappropriate shock such as uncontrolled atrial fibrillation.
- (6) The applicant's left ventricular ejection fraction is greater than 35% with a steady or improving trend.
- (7) There is no history of any symptomatic or clinically significant heart failure in the past two years.
- (8) There is no evidence of significant reversible ischemia on myocardial perfusion imaging exercise stress testing.
- (9) The applicant's exercise capacity on formal stress testing (using standard Bruce Protocol) is greater than or equal to the 8 METs (metabolic equivalents).
- (10) The applicant's treating cardiologist or electrophysiologist provides a written assessment of the individual that supports a determination that the mariner is at low risk for future arrhythmia, adverse cardiac event or sudden incapacitation based upon objective testing and standard evaluation tools.
- (11) The applicant does not have any other medical conditions which may alone, or in combination with an ICD or anti-tachycardia device, affect the mariner's fitness.

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MEDICAL WAIVERS FOR APPLICANTS WITH A HISTORY OF SEIZURE(S)

Under the regulations, convulsive disorders may be disqualifying. See 46 CFR 10.215(d). In Enclosure (3), condition #169; applications from mariners with seizures are subject to further review. While seizures or convulsive disorders are generally disqualifying, the Coast Guard may consider granting waivers under 46 CFR 10.215(g) to MMC applicants with seizure disorders under the conditions delineated below.

Unprovoked Seizures

Unprovoked seizures are those seizures not precipitated by an identifiable trigger. Mariners with a history of unprovoked seizure(s) may be considered for a waiver.

(1) Mariners with a history of epilepsy or seizure disorder may be considered for a waiver if the mariner has been seizure-free for a minimum of eight years (on or off anti-epileptic drugs (AEDs)); and

(a) If all AEDs have been stopped, the mariner must have been seizure-free for a minimum of eight years since cessation of medication; or

(b) If still using AEDs, the mariner must have been on a stable medication regimen¹ for a minimum of two years.

(2) Mariners with a single unprovoked seizure may be considered for a waiver if the mariner has been seizure-free for a minimum of four years, off AEDs); and

(a) If all medication has been stopped, the mariner must have been seizure-free for a minimum of four years since cessation of medication; or

(b) If still requiring treatment with AEDs, the mariner's condition will be considered under the criteria for epilepsy listed in (1): The mariner may be considered for a waiver after they have been seizure-free for a minimum of 8 years, and on a stable medication regimen for a minimum of two years.

Provoked Seizures

Provoked seizures are those seizures precipitated by an identifiable trigger. This does not include epileptic seizures or seizures provoked by triggers such as lack of sleep, stress, or photo-stimulation. Seizures of this nature will be evaluated under the criteria for epilepsy listed in (1). Mariners in this group can be divided into those with low risk of recurrence and those with a higher risk of recurrence (e.g., with a structural brain lesion).

¹ As used in this document, a stable medication regimen is considered to be a dosage within the therapeutic range that is consistent given changes in the mariner's weight or other factors such as drug interactions. Significant dosage reductions or tapering of the medication dosage would not be considered stable. Additionally, changes in the type or classification of anti-epileptic medication utilized would not be considered stable.

(1) If a mariner is determined to be low-risk for seizure recurrence, does not require AEDs, and the precipitating factor is unlikely to recur, a waiver may be considered when the mariner has been seizure-free and off medication for a minimum of one year.

(2) Generally, mariners with one of the following precipitating factors will be considered low-risk for recurrence:

- (a) Lidocaine-induced seizure during a dental appointment;
- (b) Concussive seizure, loss of consciousness \leq 30 minutes with no penetrating injury;
- (c) Seizure due to syncope not likely to recur;
- (d) Seizure from an acute metabolic derangement not likely to recur;
- (e) Severe dehydration;
- (f) Hyperthermia; or
- (g) Drug reaction or withdrawal.

(3) If a mariner is determined to be at higher risk for seizure recurrence, a waiver may be considered if the mariner has been seizure-free for a minimum of eight years (on or off AEDs); and

(a) If all medication has been stopped, the mariner must have been seizure-free for a minimum of eight years since cessation of medication; or

(b) If still using AEDs, the mariner must have been on a stable medication regimen for a minimum of two years.

(4) Generally, mariners with a history of provoked seizures caused by a structural brain lesion (e.g., tumor, trauma, or infection) characterized by one of the following precipitating factors will be considered at higher risk for recurrence:

- (a) Head injury with loss of consciousness or amnesia \geq 30 minutes or penetrating head injury;
- (b) Intracerebral hemorrhage of any etiology, including stroke and trauma;
- (c) Brain infection, such as encephalitis, meningitis, abscess, or cysticercosis;
- (d) Stroke;
- (e) Intracranial hemorrhage;
- (f) Post-operative brain surgery with significant brain hemorrhage; or
- (g) Brain tumor.

(5) Under exceptional circumstances in which a mariner has had provoked seizures due to a benign brain lesion that has subsequently been removed, such individuals may be considered for a waiver once they have been seizure-free for a minimum of four years, provided that objective evidence supports extremely low risk of seizure recurrence.