

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

1. INTRODUCTION.

- a. Scope: The scope of this enclosure is to detail the medical decision-making criteria for common conditions as they relate to merchant mariner fitness determinations. This enclosure is not meant to address all medical conditions. The guidance outlined in this enclosure reflects current medical standards of care in conjunction with public safety medicine tenets and fitness determinations. Acceptable low risk for safety-sensitive positions is defined as conditions whose recurrence rates are determined to be less than 2 percent. Guidance on color vision, visual acuity, and hearing requirements are discussed in greater detail in Enclosure (3) of this NVIC.
- b. The following guidance concerning criteria examined to determine fitness is presented using a systems approach. Further information on specific fitness criteria and the application of limitations are outlined in Section 4 of this Enclosure and under each condition discussed.
- c. Supporting medical testing and documentation may be required to be submitted by examining or treating providers. An effort will be made to update this enclosure on at least a biennial basis. This supporting documentation may be necessary to validate the status of the mariner's condition and to demonstrate that he or she is able to perform in a safety-sensitive position. If examining or treating providers, or mariners have further questions please contact the NMC's Medical Evaluations Division through 1-888-IASKNMC.
- d. All time frames specified with respect to the supporting evaluation data are measured from the date that the Coast Guard receives the physical examination. For all active conditions, data should be completed no more than 1 year prior to the date the physical examination is received by the Coast Guard unless otherwise noted in this document.
- e. Mariners with significant medical conditions who submit their physical examinations without the appropriate supporting documentation may be subject to delays in processing.

2. FITNESS DETERMINATIONS IN GENERAL.

- a. Fitness determinations require that medical providers understand the underlying physical condition, how that condition is impacted by service in the maritime environment, and how the condition itself can impact maritime and public safety. This involves knowing not only the mariner but understanding the conditions in which he or she works and possibly lives. Mariners work in a multitude of environments and conditions that can impact their physical condition and may also prevent them from obtaining timely medical care. Remote locations with minimal, if any, medical resources can be common, and the loss of a functioning mariner on a vessel can significantly impact the rest of the crew, both in regards to safety and to operations.

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- b. Medical conditions need to be considered in respect to their existing functional impairments, stability, need for periodic evaluations, and risk of incapacitation. Medical providers should also consider medication needs, possible impairment or incapacitation from medications, and consequences of missed dosages or lost medications on the condition. Further information on medications can be found in Enclosure (5) of this NVIC.
- c. Physical ability requirements are discussed in Enclosure (2) of this NVIC and must be considered in relation to the mariner's medical condition. Mariners must be able to perform both routine and emergency procedures. Medical conditions that preclude performance of these duties increase risk to the remaining crew, to property, and to public safety.
- d. The Coast Guard retains final authority for issuing medical certificates. The Coast Guard will consider fitness recommendations from treating providers. Final determinations will be made in accordance with the overriding safety needs of the marine transportation system.
- e. The list of conditions addressed in this enclosure is not meant to be all-inclusive. It is meant to address common conditions and allow transparency in the medical decision-making process. The basic guidelines for fitness determinations outlined in this enclosure can be similarly applied to conditions not listed below. The NMC Medical Evaluations Division can discuss conditions not listed below on a case-by-case basis, upon request.

3. MEDICAL WAIVERS AND LIMITATIONS.

- a. An applicant may submit to the Coast Guard additional correspondence, records, and reports in support of a waiver. The Coast Guard may grant a waiver if, after review of all relevant supporting medical documents and consultation with the examining provider, as needed, an applicant does not meet the standards for vision, hearing, or general physical condition; and extenuating circumstances warrant special consideration. In this regard, recommendations from agencies of the Federal Government operating government vessels, as well as owners and operators of private vessels, made on behalf of their employees, will be given full consideration.
- b. In general, medical waivers are approved for medical conditions and medications when objective medical evidence indicates that neither the condition nor the medication or its effects pose a significant risk to maritime and public safety. The Coast Guard retains final authority for the issuance of medical waivers.
- c. Medical waivers may be granted with specific requirements to which the applicant must adhere, such as more frequent medical monitoring of the medical conditions, submission of medical exams and /or tests at varying intervals to track the ongoing status of the medical condition, or operational limitations in the manner the applicant may serve under the MMC. The waiver information will be issued separately and must be readily available upon request.

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- d. Limitations may be issued based on medical and physical conditions even if a waiver is not necessary. Any limitations will be reflected on the medical certificate. More information on limitations can be found in Section 4 of this Enclosure and under each condition discussed below.

4. FITNESS CRITERIA FOR COMMON MEDICAL CONDITIONS.

- a. This Section describes the fitness criteria for common medical conditions and contains guidance on applying limitations to medical certificates. Decisions on fitness when a medical condition is present depend on careful clinical assessment and analysis and the following points need to be considered whenever a decision on fitness is taken:
 - 1) The recommendations in this enclosure are intended to allow flexibility of interpretation while being compatible with consistent decision-making that aims to maintain safety of the marine transportation system.
 - 2) The medical conditions listed are common examples of those that determine appropriate limitations on fitness for duty. The information given should only provide guidance and complement sound medical judgment.
 - 3) Each medical condition and associated treatment impact the maritime industry as it relates to the specific position in which the applicant will be serving. Knowledge of the position as well as the individual's condition is necessary in order to reach an appropriate decision on his or her fitness.
 - 4) Medical providers should submit objective documentation and testing results (to support a determination of fitness). Further guidance on specific medical conditions is available in the Condition-Specific Limitation tables that follow.
 - 5) Final fitness determinations will be made by the Coast Guard. In the spirit of transparency, the following table is provided to assist medical providers and mariners in understanding medical decision-making. In the event that a Designated Medical Examiner Program is developed, further guidance on this topic will be provided.
- b. The principles underlying the approach adopted in the Condition-Specific Limitation tables below are capable of being used for conditions not covered within the tables.
- c. Below are descriptions of the types of limitations used in the Condition-Specific Limitation tables.
 - 1) Time Limited Certificates (L):

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- i. Medical certificates may receive time limitations that cause the certificate to expire earlier than the full certification period. The full certification period is considered 2 years for STCW endorsement holders, and 5 years for national endorsement holders. Mariners who hold STCW endorsements and are 18 years old and younger may only receive a 1-year medical certificate.
- ii. Mariners receiving time-limited certificates will receive a medical certificate that expires either 1 year or 2 years from the date of the NMC-6 evaluation, depending on the medical condition, the condition's status, and on the need for periodic medical evaluations. This 1- or 2-year expiration date will apply for all medical certificate categories (i.e., First Class Pilots, STCW holders, and national certificate holders).

2) Geographic Limitations (G):

- i. Geographic limitations may include limitations to “Near Coastal Waters only” or other appropriate limitations for operating vessels, depending on the medical condition and on the condition's status.
- ii. Other geographic limitations, such as “Inland Waters only” or “25 NM from Harbor of Safe Refuge”, may be applied as deemed appropriate by the Medical Evaluations Division depending on the medical condition, the need for surveillance, and the availability to obtain medical assistance.

3) Medical Limitations (M):

- i. Limitations regarding impaired vision requiring the use of corrective lenses with a spare pair kept on board at all times will continue to be applied as per the vision standards outlined in Enclosure (3) of this NVIC.
- ii. Limitations regarding impaired hearing requiring the use of hearing aids with spare batteries kept on board at all times will continue to be applied as per the hearing standards outlined in Enclosure (3).
- iii. For mariners with Obstructive Sleep Apnea requiring the use of Continuous Positive Airway Pressure or oral/nasal appliances, a limitation specifying the following will be applied: “Special equipment required while sleeping.”
- iv. For mariners with conditions requiring medications to ensure safe functioning and any emergency needs, the following limitation will be applied: “Must carry self-administered medications.”
- v. Other medical limitations may be applied as appropriate depending on the mariner’s specific medical condition and its impact on the mariner’s ability to perform routine and emergency duties.

4) Duty (Operational) Limitations (D):

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- i. No Watchkeeping Limitation: To be used for anyone with a risk of sudden incapacitation or impaired cognition as a result of a medical condition or of medications used. "Incapacitation" means means a state without ability, qualification, or strength; to be incapable or unfit; to be disabled; or to be deprived of capacity or natural power.
- ii. No Solo Watchkeeping Limitation: To be used for those with possibly full physical and cognitive functioning, but where there is still an ongoing risk of transient physical or cognitive deficiencies.
- iii. No Night-time Watchkeeping Limitation: To be used for those unable to pass distant signal light testing, limiting them to daylight operations only.
- iv. No Bridge Watchkeeping Limitation: To be used for those who fulfill the requirements for another department, such as Engineering, but not necessarily for the Bridge.
- v. Other duty limitations may be applied as appropriate depending on the mariner's specific medical condition and its impact on the mariner's ability to perform routine and emergency duties.

d. Information on Tables:

- 1) Column 1 - The common name of the condition or group of conditions, with a brief statement on its relevance to maritime employment.
- 2) Column 2 - the guideline recommending when maritime work is unlikely to be indicated either temporarily or permanently. This column should be consulted first when the table is being used to aid decisions about fitness.
- 3) Column 3 - the guideline recommending when maritime work may be appropriate but when restriction of duties or monitoring is likely to be appropriate. This column should be consulted if the person does not fit the criteria in column 2.
- 4) Column 4 - the guideline recommending when maritime work within a person's designated department is likely to be appropriate. This column should be consulted if the person does not fit the criteria in columns 2 or 3.
- 5) Discussion of Recurrence Rates - Where the terms very low, low and moderate are used they indicate the likelihood of a recurrence. These are essentially clinical judgements but for some conditions quantitative evidence on the likelihood of recurrence is available. Where this is available, e.g. for seizure and cardiac events, it may indicate the need for additional investigations to determine an individual's likelihood of a recurrence. Quantitative recurrence levels approximate to:
 - i. very low: recurrence rate less than 2 percent per year;
 - ii. low: recurrence rate 2–5 percent per year;
 - iii. moderate: recurrence rate 5–20 percent per year.

5. CARDIOVASCULAR CONDITIONS.

DISCUSSION

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The applicant should submit any specialist evaluations and reports from any pertinent testing done in accordance with current clinical guidelines. Fitness determinations as well as any limitations will be evaluated on a case-by-case basis in accordance with the guidance in this Enclosure.

a. Coronary Artery Disease and Cardiomyopathies:

- 1) Conditions are evaluated based upon severity and stability of condition, medical treatment requirements, ability to perform routine and emergency duties, and recommendation of treating provider.
- 2) Objective testing results and supporting documentation are required to demonstrate the severity of the condition, the presence of adequate cardiac capacity; and the presence or absence of ischemia with exercise. This is necessary to show the mariner is able to perform routine and emergency duties without the risk of sudden incapacitation.
- 3) Examples of typical submission requirements include 2-D M-mode echocardiogram with Doppler flow study, cardiac catheterization, and/or a graded exercise stress test with perfusion scanning as indicated. Treadmill testing is preferably performed by standard Bruce protocol to at least 8 metabolic equivalents (METs) and 85% maximum predicted heart rate, which requires at least 7.5 minutes of exercise.
- 4) Post intervention evaluation for coronary artery bypass graft (CABG) should include a graded exercise stress test, performed no sooner than 90 days post-intervention, with perfusion scanning as clinically indicated (i.e. post myocardial infarction). Treadmill testing is preferably performed by standard Bruce protocol to at least 7.5 minutes/8 METs and 85% maximum predicted heart rate.
- 5) Post intervention evaluation for endovascular procedure (PTCA/stent) should include a graded exercise stress test no sooner than 90 days with perfusion scanning as clinically indicated (i.e. post myocardial infarction). This time period may be reduced by the NMC on a case-by-case basis.
- 6) In most cases, exercise stress testing needs to be performed to a minimum level in order for the test to be adequately predictive of future cardiac events. If pharmacological stress testing is performed, then it is necessary to demonstrate the ability to perform activities listed in Enclosure (2) of this NVIC. If medical conditions exist that prevent the mariner from exercising, these conditions may be disqualifying in their own right, and should be evaluated as well.
- 7) Cardiomyopathies with ejection fractions below 40% incur a higher risk for cardiac arrhythmias and may be disqualifying for safety sensitive positions. Exercise stress testing and Holter monitoring should be performed as clinically indicated. Cardiomyopathy treated with an implantable cardioverter defibrillator (ICD) is disqualifying.
- 8) Mariners may be disqualified due to multiple reasons, including but not limited to the following: inadequate cardiac exercise capacity; reversible cardiac ischemia with exercise; angina or other active cardiac symptoms; ICD use; ejection fraction less than 40 percent.
- 9) Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case assessment as discussed in the Condition-Specific Limitation tables.

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b. Cardiac Arrhythmias:

- 1) Conditions are evaluated based upon severity and stability of condition, medical treatment requirements, ability to perform routine and emergency duties, and recommendation of treating provider.
- 2) Supporting documentation must be submitted to objectively quantify condition. Examples of typical submission requirements include 2-dimensional M-mode echocardiogram with Doppler flow study, 24-hour Holter monitor, or a graded exercise stress test with perfusion scanning as indicated. Treadmill testing is preferably performed by standard Bruce protocol to at least 7.5 minutes/8 METS of physical activity and to 85% maximum predicted heart rate. Arrhythmias may require electrophysiology (EP) studies. If interventions or ablations are performed, post-procedure testing will be necessary.
- 3) Conditions requiring the placement of a pacemaker will require additional information. The applicant will need to submit an evaluation of the pacemaker to include a full description of device type and documentation of underlying rate and rhythm with the pacer disabled or at its lowest setting, programmed pacemaker parameters, surveillance record, and of elective replacement indicator/end of life(ERI/EOL). Mariners with pacemakers near end of life functioning may be subject to temporary disqualification or further limitations on their medical certificate on a case-by-case basis.
- 4) Cardiac arrhythmias treated with an implantable cardioverter defibrillator (ICD) are disqualifying.
- 5) Anticoagulation therapy carries the risk of significant and prolonged bleeding. Medical examiners should consider noncompliance and risk of missed dosages; individual assessments of risk are necessary.
- 6) Post intervention evaluation for cardiac arrhythmia should include a graded exercise stress test with perfusion scanning as clinically indicated and 24-hour Holter monitor. Treadmill testing is preferably performed by standard Bruce protocol to at least 7.5 minutes/8 METS and 85% maximum predicted heart rate.
- 7) Mariners may be disqualified due to multiple reasons, including but not limited to, the following: inadequate cardiac exercise capacity; reversible cardiac ischemia; unstable INR values; exercise-induced arrhythmias; symptomatic arrhythmias; malignant ventricular arrhythmias; ICD use; and any other arrhythmia-related symptoms.
- 8) Mariners who qualify for a medical certificate may be subject to limitations, on a case-by-case assessment, as discussed in the Condition-Specific Limitation tables.

c. Valvular Disorders:

- 1) Conditions are evaluated based upon severity and stability of condition, medical treatment requirements, ability to perform routine and emergency duties, and recommendation of treating provider.
- 2) Supporting documentation must be submitted to objectively quantify condition. Examples of typical submission requirements include 2-D M-mode echocardiogram with Doppler flow study, 24-hour Holter monitor, and a graded exercise stress test with perfusion scanning as

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- indicated. Treadmill testing is preferably performed by standard Bruce protocol to at least 7.5 minutes/8 METS and 85% maximum predicted heart rate.
- 3) In most cases, exercise stress testing needs to be performed to a minimum level in order for the test to be adequately predictive of future cardiac events. If pharmacological stress testing is performed, then demonstration of ability to perform activities listed in Enclosure (2) is necessary. If medical conditions exist that prevent the mariner from exercising, these conditions may be disqualifying in their own right and should be evaluated as well.
 - 4) Anticoagulation therapy carries the risk of significant and prolonged bleeding. Medical examiners should consider noncompliance and risk of missed dosages; individual assessments of risk are necessary. .
 - 5) Post intervention evaluation for valvular disorders should include a graded exercise stress test with perfusion scanning as clinically indicated and 2-D M-mode echocardiogram with Doppler flow study. Treadmill testing is preferably performed by standard Bruce protocol to at least 7.5 minutes/8 METS and 85% maximum predicted heart rate.
 - 6) Mariners may be disqualified due to multiple reasons, including but not limited to, the following: inadequate cardiac capacity; reversible cardiac ischemia; unstable INR values; and if evaluation indicates an increased risk for acute complications or rapid progression of the condition.
 - 7) Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case assessment, as discussed in the Condition-Specific Limitation tables.
- d. Vascular Disease: Examples include, but are not limited to, peripheral vascular disease, deep vein thrombosis, carotid artery disease, aortic aneurysms, and symptomatic thrombophlebitis.
- 1) Conditions are evaluated based upon severity and stability of condition, medical treatment requirements, ability to perform routine and emergency duties, and recommendation of treating provider.
 - 2) Supporting documentation must be submitted to objectively quantify condition, such as ultrasound reports, echocardiograms, and evaluation of current cardiac status. Mariners with symptomatic peripheral vascular disease should submit carotid studies and GXT with perfusion scan. Arteriogram results should be submitted if performed.
 - 3) Anticoagulation therapy carries the risk of significant and prolonged bleeding. Medical examiners should consider noncompliance and risk of missed dosages; individual assessments of risk are necessary. Refer to Enclosure (5) for specific medication recommendations.
 - 4) Mariners may be disqualified due to multiple reasons, including but not limited to, the following: inadequate cardiac exercise capacity; unstable INR values; and increased risk for acute complications or rapid progression of condition.
 - 5) Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case assessment, as discussed in the Condition-Specific Limitation tables.

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- e. Cerebrovascular Disease: Examples include stroke and transient ischemic attacks.
 - 1) Conditions are evaluated based upon severity and stability of condition, medical treatment requirements, ability to perform routine and emergency duties, and recommendation of treating provider. Case-by-case assessment should examine risk of recurrence, sudden incapacitation, and any residual neurological deficits.
 - 2) Supporting documentation must be submitted to objectively quantify condition. Mariner’s ability to perform routine and emergency duties as outlined in Enclosure (2) should be considered and documented. Examples of typical submission requirements include complete neurological evaluation with detailed history of condition, brain MRI, bilateral carotid ultrasound, and echocardiogram as clinically indicated.
 - 3) Anticoagulation therapy carries the risk of significant and prolonged bleeding. Medical examiners should consider noncompliance and risk of missed dosages; individual assessments of risk are necessary. Refer to Enclosure (5) for specific medication recommendations.
 - 4) Mariners may be disqualified due to multiple reasons, including but not limited to, the following: residual symptoms that interfere with routine or emergency duties; unstable INR values; increased risk for acute complications; rapid progression or recurrence of condition.
 - 5) Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case assessment, as discussed in the Condition-Specific Limitation tables.

CONDITION-SPECIFIC LIMITATIONS:

Condition	Incompatible with reliable performance of routine and emergency duties safely or effectively	D – Able to perform some, but not all duties G – Able to work in some, but not all waters	Able to perform all duties worldwide within designated department.
<i>Justification for criteria.</i>	T – Expected to be temporary P – Expected to be permanent	L – Increased frequency of surveillance needed M – Medical limitations or treatments specified	
CARDIO-VASCULAR SYSTEM			

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Congenital valve disease and other valvular diseases of heart (including surgery for these conditions).
Heart murmurs not previously investigated

Likelihood of progression, exercise performance limitations.

T – Until investigated and, if required, treated.
P – If unable to perform routine and emergency duties or activities in Enclosure 2 or if high likelihood of impairing event.

G, D – Consider near coastal waters and no solo watchkeeping if case-by-case assessment indicates either likelihood of acute complications or rapid progression

L – Time limited to annual or biennial certificate if periodic evaluation is recommended.

Heart murmurs – Where unaccompanied by other heart abnormalities AND considered benign by a specialist cardiologist following examination.
Other conditions – Case-by-case assessment based on specialist advice.

Hypertension
Increased likelihood of ischemic heart disease, eye and kidney damage and stroke. Possibility of acute hypertensive episode.

T – Normally if >160 systolic or >100 diastolic mm Hg until investigated and treated in accordance with national or international guidelines for hypertension management.
P – If persistently >160 systolic or >100 diastolic mm Hg with or without treatment.

G, L – Consider near coastal waters and time-limited to annual or biennial certificate if complex case or frequent evaluations needed to ensure level remains within national guideline limits.

If treated in accordance with clinical guidelines and free from impairing effects from condition or medication.

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<p>Cardiac Event (e.g., myocardial infarction, ECG evidence of past myocardial infarction or newly recognized left bundle branch block, angina, cardiac arrest, coronary artery bypass grafting, coronary angioplasty)</p>	<p>T – For at least three months after treatment stabilized, longer if clinically indicated.</p> <p>P – If criteria for issue of certificate not met, if symptoms present, or continued risk of incapacitation exists. ICD placement is disqualifying.</p>	<p>L – Issue biennial certificate if risk of recurrence is very low* AND fully compliant with risk reduction recommendations AND no relevant co-morbidity.</p> <p>G, D, L – if excess likelihood of recurrence is low*. Consider:</p> <ul style="list-style-type: none"> (i) no duty limitations or no solo watchkeeping; (ii) operations in near coastal waters; AND (iii) issue annual or biennial certificate. 	<p>Issue only if risk of recurrence is very low* AND fully compliant with risk reduction recommendations AND no relevant co-morbidity.</p>
<p><i>Sudden incapacitation, exercise performance limitation. Problems managing repeat cardiac event at sea.</i></p>		<p>G, D, L – if likelihood of recurrence is moderate* AND asymptomatic. Able to meet the physical requirements of their normal and emergency duties. Consider:</p> <ul style="list-style-type: none"> (i) no solo working or watchkeeping/lookout; and (ii) geographical limitations; (iii.) Issue annual certificate. <p>Case-by-case assessment to determine limitations.</p>	
<p>Cardiac arrhythmias and conduction defects (including those with pacemakers and ICDs)</p>	<p>T – Until investigated, treated and adequacy of treatment confirmed.</p> <p>P – If symptoms present or risk of incapacitation. ICD placement is disqualifying.</p>	<p>L – Issue biennial certificate if periodic evaluations needed AND no impairing symptoms present AND very low* risk of impairment from recurrence, based on specialist report. Consider annual or biennial certificate otherwise.</p>	<p>Periodic medical monitoring not needed or needed at intervals of more than two years and no impairing symptoms present AND very low* likelihood of impairment from recurrence, based on specialist report.</p>
<p><i>Likelihood of impairment from recurrence, sudden incapacitation, exercise performance limitation. Pacemaker/ICD activity may be affected by strong electric fields.</i></p>		<p>G, D – Consider limitations on solo watchkeeping duties or for distant waters if low* or moderate* risk of incapacitation or foreseeable need for access to specialist care.</p> <p>L, M – Consider time limitation and treatment requirements to be specified. If pacemaker is present, duration of certificate to coincide with pacemaker monitoring/interrogation needs.</p>	

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<p>Ischemic cerebrovascular disease (stroke or transient ischemic attack)</p>	<p>T – Until treated and any residual impairment stabilized and for three months after event. If unable to perform duties per Enclosure (2).</p>	<p>G, D, L – Case-by-case fitness determination, with no solo watchkeeping in near coastal waters and annual certificate. Assessment should include likelihood of future events. General standards of physical abilities should be met per Enclosure (2).</p>	<p>Not applicable.</p>
<p><i>Likelihood of recurrence, sudden loss of capability, mobility limitation. Likelihood of developing other circulatory disease causing sudden impairment.</i></p>	<p>P – If residual symptoms interfere with duties or there is moderate or higher risk of recurrence.</p>		
<p>Arterial insufficiency</p>	<p>T – Until assessed.</p>	<p>G, D, L – Consider restriction to no lonewatchkeeping duties in near coastal waters if symptoms are minor and do not impair duties or if they are resolved by surgery or other treatment and general standard of fitness can be met per Enclosure (2). Assess likelihood of future events. Annual or biennial assessment.</p>	<p>Not applicable unless mild disease with no impairing symptoms and able to perform all duties per Enclosure (2).</p>
<p><i>Likelihood of other circulatory disease causing sudden incapacitation. Limits to exercise performance capacity per Enclosure (2).</i></p>	<p>P – If incapable of meeting physical ability requirements per Enclosure (2).</p>		
<p>Varicose veins</p>	<p>T – Until treated, if impairing symptoms. Post surgery for up to one month.</p>	<p>Not applicable.</p>	<p>No impairing symptoms or complications.</p>
<p><i>Possibility of bleeding if injured, skin changes and ulceration.</i></p>			
<p>Deep vein thrombosis/ pulmonary embolus</p>	<p>T – Until investigated and treated and normally while on short term anticoagulants.</p>	<p>G, L – Consider near coastal waters and time limited to annual or biennial certificate once stabilized on anticoagulants with regular monitoring of level of coagulation.</p>	<p>Full recovery with no ongoing anticoagulant use.</p>
<p><i>Likelihood of recurrence and of serious pulmonary</i></p>	<p>P – Consider if recurrent events with persistent impairing symptoms.</p>		

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*embolus.
Possibility of
bleeding from anti-
coagulant
treatment.*

Other heart disease,
e.g., cardiomyopathy,
pericarditis, heart
failure

*Likelihood of
recurrence, sudden
incapacitation,
exercise performance
limitation.*

T – Until investigated, treated and adequacy of treatment confirmed.

P – If impairing symptoms or likelihood of impairment from recurrence. ICD placement is disqualifying.

G, D, L, M - Case-by-case assessment based on testing and specialist reports. Consider time limited to annual or biennial; near coastal waters or other geographical restriction; and no lonewatchkeeping or no watchkeeping.

Issue only if risk of recurrence is very low* or condition resolved AND fully compliant with risk reduction recommendations AND no relevant co-morbidity.

6. ENDOCRINE CONDITIONS.

DISCUSSION

Fitness determinations are based on the severity and stability of the condition, on the medication regimen, and on the recommendation of treating provider. Applicants should submit any specialist evaluations and reports from any pertinent testing done in accordance with current clinical guidelines. Fitness determinations as well as any limitations will be evaluated on a case-by-case basis.

a. Diabetes Mellitus:

- 1) Fitness determinations are based upon severity and stability of condition, medical treatment requirements, and recommendation of treating provider.
- 2) Supporting documentation must be submitted to objectively quantify condition. Examples of typical submission requirements include current treatment plan with all medications taken with side effects, evaluation of fasting plasma glucose, recent Hemoglobin A1c less than 8.0 and no more than 90 days old, recent ophthalmology consultation with dilated fundus examination to assess for any diabetic retinopathy, documentation from the treating provider addressing any history of hypoglycemic episodes with frequency of these episodes and treatment plan to stabilize condition. Insulin-requiring diabetics should also submit recorded blood sugar logs or glucometer reading

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printouts over the past 3 months, and a recent graded exercise stress test with perfusion scan. Treadmill testing is preferably performed by standard Bruce protocol to at least 7.5 minutes/8 METS of physical activity and 85% maximum predicted heart rate.

- 3) Mariners may be disqualified due to multiple reasons, including but not limited to, the following: inadequately controlled diabetes with Hemoglobin A1c levels equal to or greater than 8.0%; episodes of hypoglycemia; documented non-compliance with treatment; significant diabetic retinopathy that causes the mariner not to meet vision standards, other diabetes-related complications that impact a mariner's physical ability per Enclosure (2) of this NVIC.
 - 4) Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case assessment, as discussed in the Condition-Specific Limitation tables. Non-insulin requiring diabetics who have demonstrated good compliance may have every other year reviews. Insulin requiring diabetics should be reviewed at least annually. Insulin-requiring diabetics may, on a case-by-case basis, be restricted from unlimited worldwide service.
- b. Other Endocrine Disorders: Examples include, but are not limited to, thyroid disorders, Cushing's disease, and Addison's disease. Fitness determinations are based on the severity and stability of condition, on the medication regimen, and on the recommendation of treating provider. The applicant should submit pertinent medical testing results.
- 1) Conditions that are stable, without physical impairments or frequent medical monitoring requirements, and are at low risk for complications are compatible with sea service. Case-by-case assessment will be undertaken with treating provider input to evaluate for risk of complications and medication side effects.
 - 2) Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case assessment, as discussed in the Condition-Specific Limitation tables.

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CONDITION-SPECIFIC LIMITATIONS:

<p>Condition</p> <p><i>Justification for criteria.</i></p>	<p>Incompatible with reliable performance of routine and emergency duties safely or effectively</p> <p>T – Expected to be temporary</p> <p>P – Expected to be permanent</p>	<p>D – Able to perform some, but not all duties</p> <p>G – Able to work in some, but not all waters</p> <p>L – Increased frequency of surveillance needed</p> <p>M – Medical limitations or treatments specified</p>	<p>Able to perform all duties worldwide within designated department.</p>
<p>ENDOCRINE AND METABOLIC</p>			
<p>Diabetes – insulin using</p> <p><i>Acute impairment from hypoglycemia.</i></p> <p><i>Complications from loss of blood glucose control.</i></p> <p><i>Increased likelihood of visual, neurological and cardiac problems.</i></p>	<p>T – From start of treatment until stabilized and adequately controlled with Hemoglobin A1c less than 8.0%.</p> <p>P – If poorly controlled or not compliant with treatment. History of hypoglycemia or loss of hypoglycemic awareness. Impairing complications of diabetes.</p>	<p>G, D, L, M – Subject to evidence of good control, full compliance with treatment recommendations and no evidence of hypoglycemia. Fit for near coastal duties with no lone watchkeeping. Time limited to annual certificate. Must carry medications as appropriate.</p>	<p>Case-by-case assessment based on evidence of good control as outlined in Enclosure 4 and in the absence of impairing conditions.</p>

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<p>Diabetes – non-insulin treated, On other medication or treated by diet alone.</p>	<p>T – From distant waters and watchkeeping – until stabilized and adequately controlled with Hemoglobin A1c less than 8.0%.</p>	<p>G, D – Near coastal waters and no watchkeeping duties until stabilized.</p>	<p>When stabilized, in the absence of impairing complications.</p>
<p><i>Progression to insulin use, increased likelihood of visual, neurological, and cardiac problems.</i></p>		<p>G, D – Near coastal, no solo watchkeeping – if minor side effects from medication. Especially when using sulphonyl ureas.</p>	
		<p>L – Time-restricted certificate for all – if compliance poor or medication needs frequent review, then annual; if stable, then biennial.</p>	
<p>Other endocrine and metabolic disease, e.g., thyroid, adrenal (including Addison's) disease, pituitary, ovaries, testes</p>	<p>T – Until treatment established and stabilized without adverse effects.</p>	<p>G, L – May consider time-limited certificate or geographical limitations on a case-by-case assessment with specialist advice if any uncertainty about prognosis or side effects of treatment. Need to consider likelihood of impairing complications from condition or its treatment, including problems taking medication, and consequences of infection or injury while at sea.</p>	<p>If medication is stable with no problems in taking at sea and surveillance of conditions infrequent, no impairment and very low likelihood of complications.</p>
<p><i>Likelihood of recurrence or complications.</i></p>	<p>P – If continuing impairment, need for frequent adjustment of medication or increased likelihood of major complications.</p>		<p>Addison's disease: The risks will usually be such that an unrestricted certificate should not be issued.</p>

7. NEUROLOGIC CONDITIONS.

DISCUSSION

Fitness determinations are based on the severity and stability of the condition, on the medical treatment requirements, on the applicant's ability to perform routine and emergency duties, and on the recommendation of the treating provider. The applicant should submit any specialist evaluations and reports from any pertinent testing done in accordance with current clinical guidelines. Fitness determinations as well as any limitations will be evaluated on a case-by-case basis.

a. Seizure Disorders:

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

- 1) Seizures will be evaluated based on number of events, provoking factors, and use of anti-seizure medications. Childhood febrile seizures occurring prior to 5 years of age are excluded from evaluation. Each case will be assessed individually.
 - 2) Supporting documentation must be submitted to include complete neurological evaluation, with a detailed history of condition; reports from all pertinent diagnostic studies; current treatment plan with medications and side effects; a description of seizures to include characteristics, frequency, severity, association with neurologic phenomena; documentation of most recent seizure episode with date and precipitating factors; and a prognosis for continued work as a merchant mariner.
 - 3) Recurrent seizures not controlled on medication are considered permanently disqualifying.
 - 4) Mariners with national credentials may qualify for service with limitations once stabilized on a medication regimen and seizure-free for a period of time as outlined in the tables below. Mariners taking anti-seizure medications are not eligible for unlimited worldwide service.
- b. Sleep Disorders: Examples include, but are not limited to, Obstructive Sleep Apnea (OSA), Hypersomnia Syndromes (i.e. Narcolepsy), and any other conditions which cause insomnia that require medical therapy.
- 1) Fitness determinations are based upon severity and stability of condition, medical treatment requirements, and recommendation of treating provider.
 - 2) Supporting documentation must be submitted to objectively quantify condition. Examples of typical submission requirements include detailed evaluation by a sleep specialist, pertinent polysomnogram, and/or titration study results, and evidence of compliance with treatment. If continuous positive airway pressure (CPAP) is prescribed by a sleep specialist, treatment, compliance with CPAP treatment should be shown through CPAP log print-outs. If the applicant's OSA was surgically treated, the applicant should include a post-operative sleep study to document the cure or the need for further treatment.
 - 3) Minimal CPAP compliance is considered to be greater than or equal to four hours per night on 70% of the nights.
 - 4) Mariners may be disqualified due to multiple reasons, including but not limited to, applicant's non-compliance with treatment, an uncontrolled condition, or symptoms despite treatment.
 - 5) Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case basis as discussed in the Condition-Specific Limitation tables. Mariners with narcolepsy are not eligible for unlimited worldwide service.
- c. Chronic, Progressive Conditions: Examples include, but are not limited to, Multiple Sclerosis, Alzheimer's disease, and Parkinson's disease. Evaluation focuses on the documentation of the condition's stability, the need for periodic evaluations, the severity and frequency of symptoms, any treatment requirements, any treatment side effects, and the prognosis. Medical examiners should consider and document the applicant's ability to perform routine and emergency duties as outlined in Enclosure (2) of this NVIC. Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case basis in conjunction with advice from treating specialist, as discussed in the Condition-Specific Limitation tables. .

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- d. **Stable, Nonprogressive Conditions:** Examples include, but are not limited to, headaches, vertigo, and syncope. The evaluation focuses on the documentation of stability of condition, the need for periodic evaluations, the severity and frequency of symptoms, any medical treatment requirements, and any treatment side effects. Supporting documentation submission is based upon underlying cause and evaluation of condition etiology. Medical examiners should consider and document the mariner's ability to perform routine and emergency duties as outlined in Enclosure (2) of this NVIC. Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case basis in conjunction with advice from the treating specialist, as discussed in the Condition-Specific Limitation tables..

- e. **Intracranial Surgery, Injury, or Brain Tumors:** Evaluation focuses on documentation of stability of condition, need for periodic evaluations, severity and frequency of symptoms, medical treatment requirements, and any treatment side effects. Supporting documentation submission is based upon underlying cause and evaluation of condition etiology. Medical examiners should consider and document the applicant's ability to perform routine and emergency duties as outlined in Enclosure (2). The fitness determination focuses on risk to ship, self, and others due to seizures; complications; condition recurrence; and defects in cognitive, sensory, or motor functioning. If seizures are present as a result of the intracranial process, please refer to the section on seizures (Section 7.a. of this enclosure). Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case basis in conjunction with advice from the treating specialist as discussed in the Condition-Specific Limitation tables.

CONDITION-SPECIFIC LIMITATIONS:

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

<p>Condition</p> <p><i>Justification for criteria.</i></p>	<p>Incompatible with reliable performance of routine and emergency duties safely or effectively</p> <p>T – Expected to be temporary</p> <p>P – Expected to be permanent</p>	<p>D – Able to perform some, but not all duties</p> <p>G – Able to work in some, but not all waters</p> <p>L – Increased frequency of surveillance needed</p> <p>M – Medical limitations or treatments specified</p>	<p>Able to perform all duties worldwide within designated department.</p>
<p>DISEASES OF THE NERVOUS SYSTEM</p>			
<p>Single seizure, unprovoked</p> <p><i>Harm to ship, others, and self from seizures.</i></p>	<p>T – While under investigation and for one year after seizure.</p>	<p>G, D, L – one year after seizure and on stable medication. No solo watchkeeping duties in near coastal waters. Time-limited to annual certificates.</p>	<p>One year after seizure AND one year after end of treatment.</p>
<p>Single seizure, provoked</p> <p><i>Harm to ship, others, and self from seizures.</i></p>			<p>There should be no continuing exposure to the provoking agent.</p>
<p>Epilepsy (multiple seizures)</p> <p><i>Harm to ship, others, and self from seizures.</i></p>	<p>T – While under investigation and for 8 years after last seizure and on a stable dose of medication, or off anti-seizure medications, for at least 2 years.</p> <p>P – Recurrent seizures, not controlled by medication.</p>	<p>G, D, L – Off medication or on a stable dose of medication for at least 2 years with good compliance; case-by-case assessment of fitness restricted to no watchkeeping or no lone watchkeeping in near-coastal waters. Time-limited to annual certificate.</p>	<p>Seizure-free for at least the last 10 years, has not taken anti-epilepsy drugs during that 10-year period, and does not have a continuing likelihood of seizures.</p>
<p>Other seizure disorders (e.g., provoked by alcohol, medication, head injury/tumors) (single or multiple seizures)</p>	<p>T – While under investigation and for 4 years after date of last seizure.</p> <p>P – Recurrent seizures, not controlled by medication.</p>	<p>G, D, L – Off medication or on a stable dose of medication with good compliance and no medication side effects. Case-by-case assessment of fitness restricted to no watchkeeping or no solo watchkeeping in near-coastal waters. Time-limited to annual certificate.</p>	<p>Seizure-free for at least the last 5 years and has not taken anti-epilepsy drugs during that 5-year period, provided there is not continuing exposure to the provoking agent.</p>

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

*Harm to ship, others,
and self from seizures.*

<p>Migraine (frequent attacks causing incapacitation)</p>	<p>P – Frequent attacks leading to incapacitation.</p>	<p>G, D, L, M – Consider limitations based upon symptoms, treatment, and specialist recommendations. Case-by-case assessment.</p>	<p>No anticipated incapacitating adverse effects while at sea. No incidents during previous periods of sea service.</p>
<p><i>Likelihood of disabling recurrences.</i></p>			
<p>Sleep apnea</p>	<p>T – Until treatment started and successful for 3 months.</p>	<p>L – Time-limited to annual or biennial certificate once treatment demonstrably works effectively for 3 months, including compliance with a CPAP machine or other device.</p>	<p>If compliant with treatment and with specialist advice.</p>
<p><i>Fatigue and episodes of sleep while working.</i></p>			
	<p>P – Treatment unsuccessful or not being complied with.</p>		
<p>Narcolepsy / Primary Hypersomnolence</p>	<p>T – Until controlled by treatment for at least 2 years.</p>	<p>G, D, L – Near coastal waters and no watchkeeping duties if specialist confirms full control with treatment for at least 2 years. Time-limited to annual certificate.</p>	<p>Not applicable.</p>
<p><i>Fatigue and episodes of sleep while working.</i></p>			
	<p>P – Treatment unsuccessful or noncompliance with treatment.</p>		
<p>Other organic nervous disease e.g., multiple sclerosis, Parkinson's disease, ALS</p>	<p>T – Until diagnosed and stable. P – If symptoms affect safe working or if unable to meet physical ability requirements per Enclosure (2).</p>	<p>G, D, L, M – Case-by-case assessment based on routine and emergency duties, medications, and periodic evaluation requirements. Assessment is informed by specialist advice.</p>	<p>Case-by-case assessment based on routine and emergency duties, medications, and periodic evaluation requirements. Assessment is informed by specialist advice.</p>
<p><i>Recurrence/progression. Limitations on muscular power, balance, co-ordination, and mobility.</i></p>			
<p>Syncope and other disturbances of consciousness</p>	<p>Event is: (a) A simple faint.</p>		

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

Recurrence causing injury or loss of control.

T – Until investigated to determine cause and to demonstrate control of any underlying condition.

If no incapacitating recurrences.

-
- (b) Not a simple faint. Unexplained disturbance, not recurrent, and without any detected underlying cardiac, metabolic, or neurological cause.

T – 4 weeks

G, D, L – Case-by-case assessment. Near-coastal with no lone watchkeeping; consider time-limited certificate.

3 months after event if no recurrences.

-
- (c) Disturbance: Recurrent or with possible underlying cardiac, metabolic, or neurological cause.

T – If possible underlying cause is not identified or treatable, then disqualified for 6 months after event if no recurrences.

G, D, L – Case-by-case assessment. Consider near-coastal with no lone watchkeeping; consider time-limited certificate

If possible underlying cause found and treated, or if no treatable cause determined, 1 year after event if no recurrences

T – If possible underlying cause is found and treated, then disqualified for 1 month after successful treatment.

G, D, L – Case-by-case assessment. Consider near-coastal with no lone watchkeeping; consider time-limited certificate

With possible underlying cause found and treated, 3 months after successful treatment.

-
- (d) Disturbance of consciousness with features indicating a seizure. Go to Seizure discussion, above.

See Seizure discussion above.

See Seizure discussion above

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

P – For (a) through (d) above, if recurrent incidents persist despite full investigation and appropriate treatment.

Intracranial surgery/injury
(including treatment of vascular anomalies) or serious head injury with brain damage

Harm to ship, others, and self from seizures. Defects in cognitive, sensory, or motor function. Recurrence or complications of underlying condition.

T – For 1 year or longer until seizure likelihood is low* based on advice from specialist.

P – Continuing impairment from underlying condition or injury, or from recurrent seizures.

G, D, L, M – Consider after at least 1 year, near coastal, no solo watchkeeping if seizure likelihood is low* and there is no impairment from underlying condition or injury.

Time limited to annual or biennial depending on continued treatment and on number of periodic evaluations recommended by specialist.

No impairment from underlying condition or injury, not on anti-seizure medication. Seizure likelihood very low* AND at least 1 year after surgery or injury, or after cessation of anti-seizure medication.

Conditional on continued compliance with any treatment and on periodic review as recommended by specialist.

8. PULMONARY CONDITIONS.

DISCUSSION

Fitness determinations are based on the severity and stability of the condition, on the medical treatment requirements, and on the recommendation of the treating provider. The applicant should submit any specialist evaluations and reports from any pertinent testing done in accordance with current clinical guidelines. Fitness determinations, as well as any limitations will be evaluated on a case-by-case basis.

a. Asthma:

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

- 1) Fitness determinations are based on documentation of stability of condition, need for periodic evaluations, severity and frequency of symptoms, history of hospitalizations, treatment regimen, and any treatment or medication side effects. Childhood asthma that has resolved is excluded from evaluation. This is defined as asthma in persons less than 16 years of age.
 - 2) Supporting documentation submission requirements may include a complete treating provider's evaluation with a detailed history of the condition; reports from all pertinent diagnostic studies, including spirometry or pulmonary function testing (PFT); a current treatment plan with medications and side effects; and a description of asthma flare-ups, including characteristics, frequency, severity, association with hospitalizations, documentation of precipitating factors, and prognosis for continued work as a merchant mariner. Significantly abnormal PFT results, including FEV1 (forced expiratory volume in 1 second) or FVC (forced vital capacity) results of less than 70%, require further cardiopulmonary exercise testing to objectively validate the applicant's functional capacity and performance for routine and emergency duties as outlined in Enclosure (2) of this NVIC. Testing parameters: Passing = Minimum of 8 METS on Standard Bruce Protocol GXT, Harvard Step Testing / Recovery Phase. Testing may not be performed with supplemental oxygen.
 - 3) Mariners may be disqualified due to multiple reasons including, but not limited to non-compliance with treatment; uncontrolled symptoms despite treatment; inadequate exercise capacity; or a need for frequent nebulizer treatments.
 - 4) Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case basis in conjunction with advice from the treating specialist, as discussed in the Condition-Specific Limitation tables.
- b. Chronic Obstructive Pulmonary Disease (COPD):
- 1) Fitness determinations are based on documentation of stability of condition, need for periodic evaluations, severity and frequency of symptoms, history of hospitalizations, medical treatment requirements, and any treatment side effects.
 - 2) Supporting documentation submission requirements may include a complete treating provider's evaluation with a detailed history of the condition; reports from all pertinent diagnostic studies, including spirometry or PFT; a current treatment plan with medications and side effects; and a description of flare-ups including characteristics, frequency, severity, association with hospitalizations, documentation of precipitating factors, and prognosis for continued work as a merchant mariner. Significantly abnormal pulmonary function testing results, including FEV1 or FVC results of less than 70%, require further cardiopulmonary exercise testing to objectively validate the applicant's functional capacity and performance of routine and emergency duties as outlined in Enclosure (2). Testing parameters: Passing = Minimum of 8 METS on Standard Bruce Protocol GXT, Harvard Step Testing / Recovery Phase. Testing may not be performed with supplemental oxygen. Mariners may be disqualified due to multiple reasons including, but not limited to, non-compliance with treatment; uncontrolled symptoms despite treatment; inadequate exercise capacity; or a need for supplemental oxygen.
 - 3) Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case basis in conjunction with advice from the treating specialist, as discussed in the Condition-Specific Limitation tables. Mariners may not be eligible for unlimited worldwide sea service.

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c. Pneumothorax:

- 1) Fitness determinations are based on severity and stability of condition, medical treatment requirements, and recommendation of treating provider.
- 2) Supporting documentation submission requirements may include a treating provider's evaluation with a detailed history of the condition; reports from all pertinent diagnostic studies, including reports from chest x-rays or CT (computed tomography) scans demonstrating resolution, PFT, copies of the operative report and a thoracic surgery consultation, if surgically treated; and a prognosis for continued work as a merchant mariner. Significantly abnormal pulmonary function testing results, including FEV1 or FVC results of less than 70%, require further cardiopulmonary exercise testing to objectively validate the applicant's functional capacity and performance of routine and emergency duties as outlined in Enclosure (2). An applicant with a history of a single episode of spontaneous pneumothorax within the last 12 months may be temporarily disqualified for medical certification until the condition is fully resolved and evaluated. Mariners should submit reports of x-ray evidence showing resolution and should submit an evaluation determining that no condition that would likely cause recurrence is present (i.e., no residual blebs). Recurrent pneumothoraces generally are not eligible for certification until evaluations are carried out to determine and correct the underlying problem. Mariners with a history of invasive interventions can be evaluated for certification 3 months after the intervention or surgery.
- 3) Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case basis in conjunction with advice from the treating specialist, as discussed in the Condition-Specific Limitation tables.

d. Lung Cancer:

- 1) Fitness determinations are based on severity and stability of condition, medical treatment requirements, and recommendation of treating provider.
- 2) Supporting documentation submission requirements may include a treating provider's evaluation with a detailed history of the condition; reports from all pertinent diagnostic studies, including reports from chest x-rays or CT scans demonstrating remission, PFTs, copies of operative report and thoracic surgery consult if surgically treated; current treatment regimen and side effects; and prognosis for continued work as a merchant mariner. Significantly abnormal pulmonary function testing results, including FEV1, FVC and FEV1% (FEV1/FVC ratio) results less than 70%, require further cardiopulmonary exercise testing to objectively validate functional capacity and performance for routine and emergency duties as outlined in Enclosure (2). Testing parameters: Passing = Minimum of 8 METS on Standard Bruce Protocol GXT, Harvard Step Testing / Recovery Phase. Testing may not be performed with supplemental oxygen.
- 3) Mariners may be disqualified due to multiple reasons including, but not limited to, an inadequate functional capacity or a need for supplemental oxygen. Cancers more than 5 years in remission are compatible with sea service, provided the mariner has adequate

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

functional capacity. An applicant with cancer who is undergoing treated or who has complications may be temporarily disqualified or given limitations on a case-by-case basis.

- 4) Mariners who qualify for a medical certificate may be subject to limitations on a case-by-case basis in conjunction with advice from the treating specialist.

CONDITION-SPECIFIC LIMITATIONS:

Condition	Incompatible with reliable performance of routine and emergency duties safely or effectively	D – Able to perform some, but not all duties G – Able to work in some, but not all waters L – Increased frequency of surveillance needed M – Medical limitations or treatments specified	Able to perform all duties worldwide within designated department.
<i>Justification for criteria.</i>	T – Expected to be temporary P – Expected to be permanent		
RESPIRATORY SYSTEM			
Nose, throat and sinus conditions	T – Until resolved or treated. P – If impairing and recurrent.	G, D, L, M - Case-by-case assessment.	When treatment complete, if no factors predisposing to recurrence.
<i>Impairing for individual. May recur. Transmission of infection to food/other crew in some conditions.</i>			
Chronic bronchitis and/or emphysema (COPD)	T – If acute episode or exacerbation. P – If repeated, severe recurrences OR if general fitness standards in Enclosure (2) cannot be met, OR if impairing shortness of breath when meeting general fitness standards, OR if use of supplemental oxygen is required for routine activities	G, D, L – Case-by-case assessment. More stringency for distant water duties. Consider the ability to perform routine and emergency duties per Enclosure (2), and the need for medication Annual or biennial review.	Not applicable unless mild disease with no impairing symptoms and able to perform all duties per Enclosure (2).
<i>Reduced exercise performance capacity and impairing symptoms.</i>			

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

Asthma	T – Until episode or exacerbation is resolved, etiology investigated (including any occupational link), and effective treatment is in place.	G, D, L – consider near coastal waters only or on ship with staff physician if history of moderate asthma. Consider response to inhalers, episodes requiring hospital admission, and need for oral steroid use in the last year.	If history of mild or moderate asthma, but with no hospital admissions or prolonged oral steroid treatment in the last year and with a stable treatment regimen.
<i>Unpredictable episodes of severe breathlessness.</i>	P – If foreseeable likelihood of rapid, life-threatening asthma attack while at sea; or history of uncontrolled asthma (e.g., a history of multiple hospital admissions, intubations, difficulty controlling despite compliance with medications).		
Pneumothorax, spontaneous or traumatic	T – Normally for 3 months after initial episode, or based on the advice of the treating specialist.	G, L, D –Consider case-by-case assessment for near coastal waters, time limitation, or duty limitations depending on the likelihood of recurrence, residual symptoms, and the need for periodic evaluations by specialist.	At least 3 months after episode, provided no recurrence or residual impairment. Post surgery, based on the advice of the treating specialist.
<i>Acute impairment from recurrence.</i>	P – After recurrent episodes, unless pleurectomy or pleurodesis is performed.		

9. PSYCHIATRIC CONDITIONS AND SUBSTANCE ABUSE/DEPENDENCE.

DISCUSSION

Fitness determinations are based on the severity and stability of the condition, on the medical treatment requirements, and on the recommendation of the treating mental health provider.

- a. **Mood Disorders:** Mild mood disorders controlled on Selective Serotonin Reuptake Inhibitors (SSRIs) or Serotonin and Norpepinephrine Reuptake Inhibitors (SNRIs) that are stable and are without history of suicide attempts or hospitalizations are compatible with sea service. Mood disorders that are moderate to severe in nature, or require multiple medications or anti-psychotic medications, will require a full evaluation by a treating mental health provider. Applicants with moderate or severe disorders should be stable on medications for at least 3 months prior to being considered for certification. Limitations may be applied to the medical certificate on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

- b. **Anxiety Disorders:** Applicants with mild Anxiety Disorders controlled on SSRIs or SNRIs that are stable and are without history of suicide attempts or hospitalizations are compatible with sea service. Anxiety disorders that are moderate to severe in nature, or require multiple medications, benzodiazepine medications, or anti-psychotic medications will require full evaluation by a treating mental health provider for suitability determination. Applicants with moderate or severe disorders should be stable on medications for at least 3 months prior to being considered for certification. Anxiety disorders requiring benzodiazepine are not waivable. Limitations may be applied to the medical certificate on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.
- c. **Schizophrenia/Psychotic Disorders:** A complete psychiatric history and an evaluation by a psychiatrist are required. Include medication compliance, stability, history of flare ups, hospitalization and current treatment regime. Psychotic disorders are generally not waivable. Most anti-psychotic medications are not waivable.
- d. **Attention-Deficit/Hyperactivity Disorders (ADD/ADHD):** ADD/ADHD that is adequately treated without the use of a controlled substance is acceptable. Limitations may be applied to the medical certificate on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.
- e. **Substance Abuse/Dependence:** Diagnosis of abuse or dependence, or self-reported abuse or dependence, within the last 5 years requires an evaluation by a substance abuse professional. Applicants currently in active treatment are temporarily disqualified until treatment has been successfully completed, and the mariner receives a favorable recommendation from the substance abuse professional to return to work in safety-sensitive positions. Limitations may be applied to the medical certificate on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.

CONDITION-SPECIFIC LIMITATIONS:

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

<p>Condition</p> <p><i>Justification for criteria.</i></p>	<p>Incompatible with reliable performance of routine and emergency duties safely or effectively</p> <p>T – Expected to be temporary</p> <p>P – Expected to be permanent</p>	<p>D – Able to perform some, but not all duties</p> <p>G – Able to work in some, but not all waters</p> <p>L – Increased frequency of surveillance needed</p> <p>M – Medical limitations or treatments specified</p>	<p>Able to perform all duties worldwide within designated department.</p>
<p>MENTAL, COGNITIVE AND BEHAVIORAL DISORDERS</p>			
<p>Alcohol Abuse/Dependence</p> <p><i>Recurrence, accidents, erratic behavior or safety performance.</i></p>	<p>T – Until investigated and stabilized and until the criteria for fitness is met. Consider up to 1 year after initial diagnosis, or 1 year after any relapse.</p> <p>P – If persistent, or if there is co-morbidity likely to progress or recur while at sea.</p>	<p>G, D, L – Consider near coastal only, no lone watchkeeping, and time-limited to annual or biennial certificate, provided that:</p> <p>(a) The treating physician reports successful participation in rehabilitation program; and</p> <p>(b) The applicant has an improving trend in liver function tests.</p>	<p>After 3 years from the end of the last episode without relapse and without co-morbidity.</p>
<p>Drug dependence / Persistent substance abuse.</p> <p>Includes both illicit drug use and dependence on prescribed medications.</p> <p><i>Recurrence, accidents, erratic behavior or safety performance.</i></p>	<p>T – Until investigated and stabilized, and criteria for fitness met. Consider up to 1 year after initial diagnosis, or until 1 year after any relapse.</p> <p>P – If persistent, or if there is co-morbidity likely to progress or recur while at sea.</p>	<p>G, D, L – Consider near coastal only, no lone watchkeeping, and time-limited to annual or biennial certificate, provided that:</p> <p>(a) Substance abuse professional reports applicant is successfully participating in rehabilitation program; AND</p> <p>(b) evidence of completion of unannounced drug testing program for at least three months with no positives and at least three negatives; AND</p> <p>(c) continuing participation in drug testing program in accordance with 46 CFR 16..</p>	<p>After 3 years from end of last episode without relapse and without co-morbidity.</p>
<p>Psychosis (acute) – whether organic, schizophrenic or other category listed in the International</p>	<p><u>Following single episode with provoking factors</u></p> <p>T – Until investigated and stabilized and conditions for fitness met. At least three</p>	<p>G, D, L, M – consider near coastal waters, no lone watchkeeping, and time limited to annual</p>	<p>Case-by-case assessment at least one year after end of last episode provided provoking factors can be avoided.</p>

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

<p>Classification of Diseases. Bipolar (manic depressive) disorders</p>	<p>months since end of last episode T – Until investigated and stabilized and conditions for fitness met. At least twelve months since end of last episode</p>	<p>certificate – provided that: (a) has insight; AND (b) is compliant with treatment; AND (c) has no impairing adverse effects from medication;</p>	
<p><i>Recurrence leading to changes to perception/cognition, accidents, erratic and unsafe behavior.</i></p>	<p>Following single episode without provoking factors or more than one episodes with or without provoking factors T – Until investigated and stabilized and conditions for fitness met. At least 2 years since end of last episode. P – More than three episodes OR continuing liability to recurrence. Criteria for fitness with or without limitations are not met.</p>	<p>G, D, L, M – Restricted to near coastal waters and not to work as master in charge of vessel without close supervision and continuing medical monitoring, provided that: (a) has insight; AND (b) is compliant with treatment; AND (c) has no impairing adverse effects from medication.</p>	<p>Case-by-case assessment of risk of recurrence, at least five years since end of episode if no further episodes, AND no residual symptoms AND no medication needed during last two years.</p>
<p>Mood/affective disorders. Anxiety state, depression, or any other mental disorder likely to impair performance <i>Recurrence, reduced performance, especially in emergencies.</i></p>	<p>T – While acute, under investigation or if impairing symptoms or side effects of medication are present. At least 3 months on stable medication. P – Persistent or recurrent impairing symptoms.</p>	<p>G, D, L, M – Restricted to near coastal waters and not to work as master in charge of vessel without close supervision and continuing medical monitoring, provided that: (a) The applicant demonstrates good functional recovery; AND (b) The applicant has insight; AND (c) The applicant is fully compliant with treatment, with no impairing side effects; AND (d) There is a low* likelihood of recurrence.</p>	<p>Case-by-case assessment of risk of recurrence after at least 2 years with no additional episodes and with no medication, or on medication with no impairing side effects.</p>
<p>Mood/affective disorders. Mild or reactive symptoms of anxiety/depression <i>Recurrence, reduced</i></p>	<p>T – Until without symptoms. If on medication, to be on a stable dose and free from impairing side effects. P – Persistent or recurrent impairing symptoms.</p>	<p>G, L – Time-limited to biennial certificates for periodic evaluations and consider geographical restriction if necessary. If on medication, should be on stable dose and free from impairing symptoms or impairing side effects.</p>	<p>Case-by-case assessment after 1 year from end of most recent episode, if symptom-free and off medication, or on medication with no impairing side effects</p>

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

*performance,
especially in
emergencies.*

Other disorders, e.g., disorders of personality, attention (ADHD), development (autism)

*Impairment of
performance and
reliability, and impact
on relationships.*

P – If considered to have safety-critical consequences.

G, D, L – Case-by-case assessment.

No anticipated adverse effects while at sea. No incidents during previous periods of sea service.

10. GASTROINTESTINAL CONDITIONS.

DISCUSSION

Fitness determinations are based upon the severity and stability of the condition, the medical treatment requirements, and the recommendation of treating provider. The applicant should submit any specialist evaluations and reports from any pertinent testing done in accordance with current clinical guidelines. Fitness determinations as well as any limitations will be evaluated on a case-by-case basis.

- a. Inflammatory Bowel Diseases (e.g., Crohn’s Disease, Ulcerative Colitis): Fitness determination depends upon supporting documentation detailing frequency and severity of flare-ups, treatment regimen, possible side effects from treatment regimen, and baseline symptoms. Mariners with multiple daily bowel movements, hematochezia, frequent flare-ups, a history of hospitalizations, or uncontrollable triggers may not be compatible with sea service. The applicant should submit any specialist evaluations and reports from any pertinent testing done in accordance with current clinical guidelines. Fitness determinations and any limitations will be evaluated on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.
- b. Peptic Ulcer Disease: The applicant may be compatible with sea service, provided there are no recent, active, or bleeding ulcers. The applicant should be stable on medication regimen. The applicant should submit any specialist evaluations and reports from any pertinent

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testing done in accordance with current clinical guidelines. Fitness determinations and any limitations will be evaluated on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.

- c. Esophageal Varices: The fitness determination depends on the underlying cause of the varices, the stability of the condition, and the treatment plan. Recent active bleeding or a history of hospitalizations within the past 12 months may require limitations on a case-by-case basis. The applicant should submit any specialist evaluations and reports from any pertinent testing done in accordance with current clinical guidelines. Fitness determinations and any limitations will be evaluated on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.
- d. Colon Cancer: Diagnosis within the past 5 years that is not in remission or is still undergoing active treatment requires submission of supporting medical documentation. The fitness determination relies on documentation of the stability of the condition, the need for follow-up, the severity and frequency of symptoms, the treatment regimen, and any treatment side effects. Limitations may be applied to the medical certificate on a case-by-case basis.

CONDITION-SPECIFIC LIMITATIONS:

Condition	Incompatible with reliable performance of routine and emergency duties safely or effectively	D – Able to perform some, but not all duties	Able to perform all duties worldwide within designated department.
<i>Justification for criteria.</i>	T – Expected to be temporary	G – Able to work in some, but not all waters	
	P – Expected to be permanent	L – Increased frequency of surveillance needed	
		M – Medical limitations or treatments specified	
DIGESTIVE SYSTEM			
Oral health	T – If visual evidence of severe untreated dental defects or oral disease.	G – Consider limitation to near coastal waters, if criteria for full fitness not met.	If no visual evidence of severe untreated dental defects or oral disease.
<i>Acute pain from toothache. Recurrent mouth and gum infections.</i>			

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<p>Peptic ulcer</p>	<p>T – until healed, cured by surgery, or by control of Helicobacteria and on normal diet for three months.</p>	<p>G – Consider case-by-case assessment for earlier return to near-coastal duties.</p>	<p>When healed or cured and on normal diet for three months.</p>
<p><i>Recurrence with pain, bleeding, or perforation.</i></p>	<p>P – If ulcer persists despite surgery and medication.</p>		
<p>Hernias, inguinal and femoral</p>	<p>T – until investigated and, if required, treated.</p>	<p>G – Untreated; consider case-by-case assessment for near coastal waters, if necessary.</p>	<p>When satisfactorily treated, or exceptionally, when surgeon reports that there is no risk for strangulation.</p>
<p><i>Likelihood for strangulation.</i></p>			
<p>Hernias, umbilical and ventral</p>	<p>Case-by-case assessment depending on severity of symptoms or impairment. Consider implications of regular heavy, whole-body physical effort.</p>	<p>G, D, L – Case-by-case assessment depending on severity of symptoms or impairment. Consider implications of regular heavy, whole-body physical effort.</p>	<p>Case-by-case assessment depending on severity of symptoms or impairment. Consider implications of regular heavy, whole-body physical effort.</p>
<p><i>Instability of abdominal wall on bending and lifting.</i></p>			
<p>Hernias, diaphragmatic (hiatus)</p>	<p>Case-by-case assessment based on severity of symptoms when lying down, and on any sleep disturbance caused by them.</p>	<p>G, D, L – Case-by-case assessment based on severity of symptoms when lying down, and on any sleep disturbance caused by them.</p>	<p>Case-by-case assessment based on severity of symptoms when lying down, and on any sleep disturbance caused by them.</p>
<p><i>Reflux of stomach contents and acid-causing heartburn, etc.</i></p>			
<p>Non-infectious enteritis, colitis, Crohn’s disease, diverticulitis, etc.</p>	<p>T – Until investigated and treated. P – If severe or recurrent.</p>	<p>G, L – Does not meet the requirements for an unrestricted certificate, but if rapidly developing recurrence is unlikely, then consider near-coastal duties with time-limited annual or biennial certificate, depending on need for periodic evaluations by specialist.</p>	<p>Case-by-case specialist assessment. Fully controlled with low likelihood of recurrence.</p>
<p><i>Impairment and pain.</i></p>			

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

<p>Anal conditions (e.g., hemorrhoids, fissures, fistulae)</p> <p><i>Likelihood of episode-causing pain and limited activity.</i></p>	<p>T – If hemorrhoids are prolapsed, bleeding repeatedly, or causing symptoms; if fissure or fistula are painful, infected, bleeding repeatedly, or causing fecal incontinence.</p> <p>P – Consider if not treatable or recurrent.</p>	<p>G, D, L – Case-by-case assessment of untreated cases, or until satisfactorily treated.</p>	<p>When satisfactorily treated.</p>
<p>Cirrhosis of liver</p> <p><i>Liver failure. Bleeding oesophageal varices.</i></p>	<p>T – Until fully investigated.</p> <p>P – If severe or complicated by ascites or esophageal varices.</p>	<p>G, D, L – Case-by-case with specialist assessment.</p>	<p>Case-by-case with specialist assessment.</p>
<p>Biliary tract disease</p> <p><i>Biliary colic from gallstones, jaundice, liver failure.</i></p>	<p>T – Biliary colic, until definitively treated.</p> <p>P – Advanced liver disease, recurrent or persistent impairing symptoms.</p>	<p>G, D, L – Case-by-case specialist assessment for limitations, unless definitively treated or condition resolved.</p>	<p>Case-by-case specialist assessment. Very low likelihood of recurrence or worsening in next 2 years.</p>
<p>Pancreatitis</p> <p><i>Likelihood of recurrence.</i></p>	<p>T – Until resolved.</p> <p>P – If recurrent or alcohol-related, unless confirmed abstinence.</p>	<p>G, D, L – Case-by-case assessment based on specialist reports.</p>	<p>Case-by-case assessment based on specialist reports, very low likelihood of recurrence.</p>
<p>Stoma (ileostomy, colostomy)</p> <p><i>Impairment if control is lost (e.g., need for bags). Potential problems during prolonged emergency.</i></p>	<p>T – Until stabilized.</p> <p>P – Poorly controlled.</p>	<p>G, D, L – Case-by-case assessment based on specialist reports.</p>	<p>Case-by-case assessment based on specialist reports.</p>

11. GENITO-URINARY CONDITIONS.

DISCUSSION

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

Fitness determinations are based on the severity and stability of condition, the medication regimen, and on the recommendation of the treating provider. The applicant should submit any specialist evaluations and reports from any pertinent testing done in accordance with current clinical guidelines. Fitness determinations and any limitations will be evaluated on a case-by-case basis.

- a. **Chronic Renal Failure:** The fitness determination relies on documentation of the stability of condition, the need for periodic evaluations, the severity and frequency of symptoms, the treatment regimen, and any treatment side effects. Fitness determinations as well as any limitations will be evaluated on a case-by-case basis, as discussed in the Condition-Specific Limitation tables. Conditions requiring dialysis are not compatible with sea service and are disqualifying.
- b. **Renal Calculi:** A remote history or a single, uncomplicated episode of a stone is compatible with sea service. Further evaluation will be necessary if the applicant has a significant history of multiple stones that cannot be prevented or controlled, or which necessitated repatriation from duty stations or otherwise interfered with mariner duties. The applicant should submit any specialist evaluations and reports from any pertinent testing done in accordance with current clinical guidelines. The fitness determinations and any limitations will be evaluated on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.
- c. **Renal or Prostate Tumors:** Generally compatible with sea service, provided the applicant is not experiencing complications or side effects from treatment. The applicant should submit any specialist evaluations and reports from any pertinent testing done in accordance with current clinical guidelines. The fitness determinations and any limitations will be evaluated on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.

CONDITION-SPECIFIC LIMITATIONS:

Condition <i>Justification for criteria.</i>	Incompatible with reliable performance of routine and emergency duties safely or effectively T – Expected to be temporary P – Expected to be permanent	D – Able to perform some, but not all duties G – Able to work in some, but not all waters L – Increased frequency of surveillance needed M – Medical limitations or treatments specified	Able to perform all duties worldwide within designated department.
GENITO-URINARY CONDITIONS			

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Acute nephritis	T – Until resolved.	G, D, L – Case-by-case assessment if any residual effects.	Full recovery with normal kidney function and no significant residual damage.
<i>Renal failure, hypertension.</i>			
Sub-acute or chronic nephritis or nephrosis	T – Until investigated.	G, D, L – Case-by-case assessment based on renal function and the likelihood of complications.	Case-by-case assessment by specialist, based on renal function and the likelihood of complications.
<i>Renal failure, hypertension.</i>			
Renal failure			
Renal or ureteric calculus	T – Until investigated and treated.	G, D, L – consider ability to maintain adequate hydration. Case-by-case assessment.	Case-by-case assessment with normal urine and renal function without recurrence.
<i>Pain from renal colic.</i>			
Prostatic enlargement/urinary obstruction	T – Until investigated and treated.	G, L – Case-by-case assessment for near-coastal duties and time-limited certificate if necessary.	Successfully treated with low* likelihood of recurrence.
P – If not remediable.			
<i>Acute retention of urine.</i>			

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

<p>Gynecological conditions, e.g., heavy vaginal bleeding, severe menstrual pain, endometriosis, or prolapse of genital organs</p>	<p>T – If impairing or if investigation is necessary to determine cause and treatment.</p>	<p>G, D, L – Case-by-case assessment if condition is likely to require treatment on voyage or to affect working capacity.</p>	<p>Fully resolved with low* likelihood of recurrence.</p>
<p><i>Impairment from pain or bleeding.</i></p>			
<p>Proteinuria, hematuria, glycosuria, or other urinary abnormality</p>	<p>T– If initial findings are clinically significant. P – If there is a serious and non-remediable underlying cause, e.g., impairment of kidney function.</p>	<p>L – Consider time-limited certificate when periodic evaluations are required. G – Consider near coastal waters if there is no known cause, but no immediate problem.</p>	<p>Low* likelihood of serious underlying condition.</p>
<p><i>Indicator of kidney or other diseases.</i></p>			
<p>Removal of kidney, or one non-functioning kidney</p>	<p>P – Significant dysfunction in remaining kidney.</p>	<p>G, L – Case-by-case assessment. Consider time limitations for periodic evaluations.</p>	<p>Remaining kidney must be fully functional and not liable to progressive disease, based on renal investigations and specialist report.</p>
<p><i>Limits to fluid regulation under extreme conditions, if remaining kidney is not fully functional</i></p>			

12. OPHTHALMOLOGICAL CONDITIONS.

DISCUSSION

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

Fitness determinations are based on the severity and stability of the condition, the medication regimen, and the recommendation of the treating provider. The applicant should submit any specialist evaluations and reports from any pertinent testing done in accordance with current clinical guidelines. Fitness determinations as well as any limitations will be evaluated on a case-by-case basis.

- a. **Glaucoma:** The evaluation focuses on documentation of the stability of condition, the need for periodic evaluations, the severity and frequency of symptoms, the treatment regimen, and any treatment side effects. Visual field testing showing deficits may lead to limitations or disqualification, based on severity. Limitations may be applied to the medical certificate on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.
- b. **Monocularity:** The evaluation focuses on documentation of the condition's etiology, its stability, and its prognosis. Visual acuity in the remaining eye must meet standards outlined in Enclosure (3) of this NVIC. A minimum of 6 months of stable monocularity is required prior to consideration for certification, to allow for an adjustment to the condition. After January 1, 2017, monocularity is considered disqualifying for STCW credentials. Limitations may be applied to the medical certificate on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.
- c. **Progressive Eye Disorders:** The fitness determination relies on documentation of the stability of the condition, the need for follow-up, the severity and frequency of symptoms, the treatment regimen, and any treatment side effects. If eligible for a certificate, limitations may be applied on a case-by-case basis, in accordance with Enclosure (3) and the Condition-Specific Limitation tables.

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

CONDITION-SPECIFIC LIMITATIONS:

<p>Condition</p> <p><i>Justification for criteria.</i></p>	<p>Incompatible with reliable performance of routine and emergency duties safely or effectively</p> <p>T – Expected to be temporary</p> <p>P – Expected to be permanent</p>	<p>D – Able to perform some, but not all duties</p> <p>G – Able to work in some, but not all waters</p> <p>L – Increased frequency of surveillance needed</p> <p>M – Medical limitations or treatments specified</p>	<p>Able to perform all duties worldwide within designated department.</p>
<p>EYE DISORDERS</p>			
<p>Eye disorders, progressive or recurrent (e.g., glaucoma, maculopathy, diabetic retinopathy, retinitis pigmentosa, diplopia, blepharospasm, corneal ulceration, cataracts, retinal detachment).</p> <p><i>Future inability to meet vision standards, risk of recurrence.</i></p>	<p>T – Temporarily unable to meet relevant vision standards in Enclosure (3) and low likelihood of subsequent deterioration or impairing recurrence once treated or recovered.</p> <p>P – Unable to meet relevant vision standards in Enclosure (3) or if treated, still with increased likelihood of impairing recurrence.</p>	<p>D, M – Consider duty limitations if necessary for night or color vision deficits.</p> <p>L – Consider annual or biennial certificate if risk of progression is foreseeable and it can be detected by regular monitoring.</p>	<p>Very low likelihood of recurrence or progression to a level where vision standards in Enclosure (3) are not met during period of certificate.</p>

13. INFECTIONS.

DISCUSSION

- a. Infectious Diseases: Examples include, but are not limited to, hepatitis, tuberculosis, sexually transmitted diseases, gastrointestinal infections, and HIV disease. The evaluation focuses on the infection risk to others, the risk of recurrence, and on the likelihood of condition progression. Supporting documentation submission requirements may include a treating provider evaluation with a detailed history of the condition, reports from all pertinent diagnostic studies, a description of the current treatment regimen and any side

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effects, and a prognosis for continued work as a merchant mariner. Limitations may be applied to the medical certificate on a case-by-case basis in accordance with the Condition-Specific Limitation tables.

CONDITION-SPECIFIC LIMITATIONS:

Condition	Incompatible with reliable performance of routine and emergency duties safely or effectively	D – Able to perform some, but not all duties	Able to perform all duties worldwide within designated department.
<i>Justification for criteria.</i>	T – Expected to be temporary	G – Able to work in some, but not all waters	
	P – Expected to be permanent	L – Increased frequency of surveillance needed	
		M – Medical limitations or treatments specified	
A 00–B99 INFECTIONS			
Gastrointestinal infection	T – If detected while onshore: current symptoms or awaiting test results on carrier status.	No restriction necessary.	<u>Non-stewards department</u> – When satisfactorily treated or resolved.
<i>Transmission to others, recurrence.</i>	P – Confirmed carrier status until elimination demonstrated.		<u>Stewards department</u> – Fitness decision to be based on medical advice when satisfactorily treated or resolved—bacteriological clearance may be required
Pulmonary TB	T – Positive screening test or clinical history, until investigated.	G, L – – consider near coastal with annual or biennial time restriction when not ill, no longer infectious, but still on treatment and under specialist supervision.	(a) When investigations completed and no disease identified; OR
<i>Transmission to others, recurrence.</i>	If infected, until treatment stabilizes and lack of infectivity is confirmed.		(b) When treatment has been completed and disease resolved.
	P – Relapse or severe residual damage.	M – To carry self-administered medications as applicable.	

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<p>Sexually transmissible infections</p>	<p>T – If detected while onshore: until diagnosis confirmed, treatment initiated and impairing symptoms resolved.</p>	<p>G – Consider near coastal waters if necessary, if oral treatment regime is in place and symptoms are non-incapacitating.</p>	<p>On successful completion of treatment.</p>
<p><i>Acute impairment, recurrence.</i></p>	<p>P – Untreatable, impairing late complications.</p>		
<p>Hepatitis A</p>	<p>T – Until jaundice resolved and liver function tests returned to normal.</p>	<p>Not applicable.</p>	<p>On full recovery.</p>
<p><i>Transmissible by food or water contamination.</i></p>			
<p>Hepatitis B, C, etc.</p>	<p>T – Until jaundice resolved and liver function tests returned to normal or near normal.</p>	<p>G, L – Geographic and time limitations if there is uncertainty about total recovery or infectivity. Case-by-case decision making based on duties and voyage patterns.</p>	<p>On full recovery and confirmation of a low level of infectivity.</p>
<p><i>Transmissible by contact with blood or other body fluids. Possibility of permanent liver impairment and liver cancer.</i></p>	<p>P – Persistent liver impairment or encephalopathy with symptoms affecting safe work at sea or with risk of debilitating complications..</p>		
<p>HIV+</p>	<p>T – Until stabilized on treatment with CD4 level of >350 or when treatment changed and tolerance of new medication uncertain.</p>	<p>G, L – Time-limited to annual or biennial certificate and/or near coastal waters, if HIV+ and low likelihood of progression on no treatment, or on stable medication without side effects, but requiring periodic evaluations.</p>	<p>HIV+ no current impairment and very low* likelihood of disease progression. No side effects from treatment or requirements for frequent surveillance..</p>
<p><i>Progression to HIV-associated diseases or AIDS.</i></p>	<p>P – Non-reversible impairing HIV-associated diseases. Continuing, impairing effects of medication.</p>		
<p>Other infection</p>	<p>T – If detected while onshore: until free from risk of transmission and capable of performing duties.</p>	<p>Case-by-case assessment based on nature of infection.</p>	<p>Full recovery and confirmation of a low level of infectivity.</p>
<p><i>Personal impairment, infection of others.</i></p>	<p>P – If continuing likelihood of repeated impairing or infectious recurrences.</p>		

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14. CANCERS.

DISCUSSION

- a. Cancer, any type: The evaluation focuses on the documentation of the stability of the condition, the need for periodic evaluations, the severity and frequency of symptoms, the treatment regimen, and any treatment side effects. Evaluators should consider and review an applicant's ability to perform routine and emergency duties as outlined in Enclosure (2) of this NVIC. Cancers more than 5 years in remission are compatible with sea service. Cancer currently being treated or with complications may be temporarily disqualified or given limitations on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.

CONDITION-SPECIFIC LIMITATIONS:

Condition	Incompatible with reliable performance of routine and emergency duties safely or effectively	D – Able to perform some, but not all duties	Able to perform all duties worldwide within designated department.
<i>Justification for criteria.</i>	T – Expected to be temporary	G – Able to work in some, but not all waters	
	P – Expected to be permanent	L – Increased frequency of surveillance needed	
		M – Medical limitations or treatments specified	
CANCERS			
Malignant neoplasms , including lymphoma, leukemia, and related conditions	T – Until investigated, treated, and the prognosis is assessed. P – Continuing impairment with symptoms affecting safe work at sea or with a high likelihood of recurrence.	L – Consider time-limited restriction to annual or biennial certificate if: (a) Cancer diagnosed <5 years ago; AND (b) There is no current impairment to the performance of normal or emergency duties or living at sea; AND (c) low likelihood of recurrence and minimal risk of requirement for urgent medical treatment for any recurrence . G– consider restriction to near coastal waters if any continuing impairment does not interfere with routine and emergency duties AND any recurrence is unlikely to require emergency medical treatment	Cancer diagnosed more than 5 years ago, OR specialist reviews no longer required and no current impairment or low continuing likelihood of impairment from recurrence. To be confirmed by specialist report with evidence for opinion stated.
<i>Recurrence – especially acute complications e.g. harm to self from bleeding and to others from seizures.</i>			

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

15. **BLOOD DISORDERS.**

DISCUSSION

- a. Hematology: Hematologic conditions to include thrombocytopenia, sickle cell disease, and anemia, will be evaluated based on documentation of the stability of the condition, the need for periodic evaluations, the severity and frequency of symptoms, the treatment regimen, and presence of any treatment side effects. Mariner’s ability to perform routine and emergency duties as outlined in Enclosure (2) should be considered and documented. Limitations may be applied to the credential and/or medical certificate on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.

CONDITION-SPECIFIC LIMITATIONS:

Condition	Incompatible with reliable performance of routine and emergency duties safely or effectively	D – Able to perform some, but not all duties G – Able to work in some, but not all waters L – Increased frequency of surveillance needed M – Medical limitations or treatments specified	Able to perform all duties worldwide within designated department.
<i>Justification for criteria.</i>	T – Expected to be temporary P – Expected to be permanent		
BLOOD DISORDERS			
Anemia/ Hemoglobinopathies	T – From distant waters, until hemoglobin is normal and stable. P – Severe, recurrent, or continuing anemia or impairing symptoms from red cell breakdown that are untreatable.	G, L – Consider limitations for near-coastal waters and biennial certificate if there is a reduced hemoglobin level, but applicant is still asymptomatic.	Normal levels of hemoglobin.
<i>Reduced exercise tolerance. Episodic red cell breakdown.</i>			
Splenectomy (history of surgery)	T – After surgery until fully recovered.	G – Case-by-case assessment. Likely to be fit for coastal and temperate work, but may need restriction on service in tropics.	Case-by-case assessment.
<i>Increased susceptibility to certain infections.</i>			

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Other diseases of the blood and blood-forming organs	T – While under investigation. P – Chronic coagulation disorders.	Case-by-case assessment.	Case-by-case assessment.
<i>Varied – recurrence of abnormal bleeding, possibly reduced exercise tolerance, or low resistance to infections.</i>			

16. PREGNANCY.

CONDITION-SPECIFIC LIMITATIONS:

Condition	Incompatible with reliable performance of routine and emergency duties safely or effectively	D – Able to perform some, but not all duties G – Able to work in some, but not all waters L – Increased frequency of surveillance needed M – Medical limitations or treatments specified	Able to perform all duties worldwide within designated department.
<i>Justification for criteria.</i>	T – Expected to be temporary P – Expected to be permanent		
PREGNANCY			
Pregnancy	T – Late stage of pregnancy and early postnatal period. Complications of pregnancy requiring higher level of surveillance.	G, D, L – Case-by-case assessment if minor impairing effects. May consider working until later in pregnancy on near coastal vessel.	Uncomplicated pregnancy with no impairing effects: normally until 24th week or until specialist recommendation.
<i>Complications, late limitations on mobility. Potential for harm to mother and child in the event of premature delivery at sea.</i>			

17. SKIN CONDITIONS.

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CONDITION-SPECIFIC LIMITATIONS:

Condition	Incompatible with reliable performance of routine and emergency duties safely or effectively	D – Able to perform some, but not all duties	Able to perform all duties worldwide within designated department.
<i>Justification for criteria.</i>	T – Expected to be temporary	G – Able to work in some, but not all waters	
	P – Expected to be permanent	L – Increased frequency of surveillance needed	
		M – Medical limitations or treatments specified	
SKIN			
Skin infections	T – Until satisfactorily treated.	G, D, L – Based on nature and severity of infection.	Cured with low likelihood of recurrence.
<i>Recurrence, transmission to others.</i>	P – Consider for Food Handlers with recurrent problems.		
Other skin diseases, e.g., eczema, dermatitis, psoriasis	T – Until investigated and satisfactorily treated.	Case-by-case assessment.	Stable, not impairing.
<i>Recurrence, sometimes occupational cause.</i>		G, D, L – As appropriate if aggravated by heat or substances at work.	

18. MUSCULOSKELETAL CONDITIONS.

DISCUSSION

- a. Musculoskeletal Conditions: Mild, single episodes involving sprains, strains, or fractures, with symptoms lasting less than 30 days, are considered temporarily disqualifying and are more appropriately handled at the local company level. The evaluation for more significant, chronic conditions focuses on documentation of the stability of the condition, the need for periodic evaluations, the severity and frequency of symptoms, the treatment regimen, and on any treatment side effects. Evaluators should consider and document the applicant's ability to perform routine and emergency duties as outlined in Enclosure (2) of this NVIC. Limitations may be applied to the credential and/or medical certificate on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

CONDITION-SPECIFIC LIMITATIONS:

<p>Condition</p> <p><i>Justification for criteria.</i></p>	<p>Incompatible with reliable performance of routine and emergency duties safely or effectively</p> <p>T – Expected to be temporary</p> <p>P – Expected to be permanent</p>	<p>D – Able to perform some, but not all duties</p> <p>G – Able to work in some, but not all waters</p> <p>L – Increased frequency of surveillance needed</p> <p>M – Medical limitations or treatments specified</p>	<p>Able to perform all duties worldwide within designated department.</p>
MUSCULO-SKELETAL			
<p>Osteoarthritis, other joint diseases and subsequent joint replacements</p> <p><i>Pain and mobility limitation affecting routine or emergency duties. Possibility of infection or dislocation, and limited life of replacement joints.</i></p>	<p>T – Full recovery of function and specialist advice required before returning to sea after hip or knee replacement.</p> <p>P – Advanced and severe cases.</p>	<p>G, D, L – Case-by-case assessment based on job requirements and history of condition. Consider emergency duties and evacuation from ship. Should meet the physical ability requirements in Enclosure (2).</p>	<p>Case-by-case assessment. Able to fully meet routine and emergency duty requirements with very low* likelihood of worsening such that duties could not be performed.</p>
<p>Recurrent instability of shoulder or knee joints</p> <p><i>Sudden limitation of mobility, pain.</i></p>	<p>T – Until satisfactorily treated.</p>	<p>G, D, L – Case-by-case assessment. Should meet the physical ability requirements to perform routine and emergency duties in Enclosure (2).</p>	<p>Treated with very low* likelihood of recurrence.</p>
<p>Back pain</p> <p><i>Pain and mobility limitation affecting</i></p>	<p>T – Acute stage.</p> <p>P – – if chronically incapacitating.</p>	<p>G, D, L – Case-by-case assessment. Should meet the physical ability requirements in Enclosure (2).</p>	<p>Case-by-case assessment. Should meet the physical ability requirements in Enclosure (2).</p>

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normal or emergency duties. Exacerbation of impairment.

Limb prosthesis

Mobility limitation affecting normal or emergency duties.

P – if routine and emergency duties cannot be performed.

G, D, L – Case-by-case assessment if routine and emergency duties can be performed but there are limitations specific to other activities.

If the general fitness requirements in Enclosure (2) are fully met. Arrangements for fitting prosthesis in an emergency must be confirmed.

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

19. **MISCELLANEOUS CONDITIONS.**

DISCUSSION

Fitness determinations are based upon severity and stability of condition, medication regimen, and recommendation of treating provider. Specialist evaluation and reports from any pertinent testing done in accordance with current clinical guidelines should be submitted. Fitness determinations as well as any limitations will be evaluated on a case-by-case basis .

- a. **Life-threatening Allergies:** Fitness determinations are based on documentation of the severity and frequency of symptoms, the management of condition, and the need for access to medical care. Mariners with life-threatening responses that cannot be practically controlled or treated at sea can lead to safety-critical adverse effects. Case-by-case assessments of condition will be evaluated in conjunction with advice from the treating provider. Evaluators should consider and document the applicant's ability to perform routine and emergency duties as outlined in Enclosure (2). Limitations may be applied to the credential and/or medical certificate on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.
- b. **Organ Replacement:** Fitness determinations are based on documentation of the stability of the condition, the need for periodic evaluations, the severity and frequency of any residual symptoms, the treatment regimen, and on the presence of any treatment side effects. Evaluators should consider and document the applicant's ability to perform routine and emergency duties as outlined in Enclosure (2). Limitations may be applied to the credential and/or medical certificate on a case-by-case basis, as discussed in the Condition-Specific Limitation tables.

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

CONDITION-SPECIFIC LIMITATIONS:

<p>Condition</p> <p><i>Justification for criteria.</i></p>	<p>Incompatible with reliable performance of routine and emergency duties safely or effectively</p> <p>T – Expected to be temporary</p> <p>P – Expected to be permanent</p>	<p>D – Able to perform some, but not all duties</p> <p>G – Able to work in some, but not all waters</p> <p>L – Increased frequency of surveillance needed</p> <p>M – Medical limitations or treatments specified</p>	<p>Able to perform all duties worldwide within designated department.</p>
GENERAL			
<p>Allergies other than allergic dermatitis and asthma</p> <p><i>Likelihood of recurrence and increasing severity of response. Reduced ability to perform duties.</i></p>	<p>T – Until fully investigated by a specialist.</p> <p>P – If life-threatening response reasonably foreseeable.</p>	<p>G, D, L, M – Case-by-case assessment of likelihood and severity of symptoms and of access to medical care.</p>	<p>Where response is impairing rather than life-threatening, and side effects can be fully controlled by long-term, non-sedating self-medication or by lifestyle modifications that are practical at sea with no safety-critical adverse effects.</p>
<p>Transplants –</p> <p><i>Possibility of rejection. Side effects of medication.</i></p>	<p>T – until effects of surgery and anti-rejection medication stable.</p> <p>P – case-by-case assessment with specialist advice.</p>	<p>G, D, L – Case-by-case assessment with specialist advice.</p>	<p>Not applicable.</p>
<p>Progressive conditions that currently meet the functional requirements per Enclosure (2).</p>	<p>T – Until investigated and treated if indicated.</p> <p>P – Case-by-case assessment with specialist advice based upon ability to perform routine and emergency duties.</p>	<p>G, D, L, M – Case-by-case assessment with specialist advice. Such conditions are acceptable if harmful progression before next certificate period is unlikely.</p>	<p>Case-by-case assessment with specialist advice. Such conditions are acceptable if harmful progression before next certificate period is unlikely.</p>

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<p>Ear disorders: progressive (e.g.otosclerosis)</p>	<p>T – Temporarily unable to meet relevant hearing standards in Enclosure (3) and low likelihood of subsequent deterioration or impairing recurrence once treated or recovered.</p> <p>P – Unable to meet relevant hearing standards in Enclosure (3) or if treated, still with increased likelihood or subsequent deterioration or impairing recurrence.</p>	<p>L – Consider annual or biennial certificate if risk of progression foreseeable and if progression can be detected by regular monitoring.</p>	<p>Very low* likelihood of recurrence. Progression to a level where hearing standards in Enclosure (3) are not met during period of certificate is very unlikely.</p>
<p>Otitis – external or media</p> <p><i>Recurrence, risk as infection source in Food Handlers. Problems using hearing protection.</i></p>	<p>T – Until treated. P – If chronic discharge from a Food Handler’s ear.</p>	<p>G, D, L – Case by case assessment. Consider effects of heat, humidity, and hearing protection use.</p>	<p>Effective treatment and no excess likelihood of recurrence.</p>
<p>Speech disorders</p> <p><i>Limitations to essential verbal communications.</i></p>	<p>T – Until condition resolved. P – If incompatible with reliable performance of routine and emergency duties safely or effectively.</p>	<p>G, D, L – If assistance with communication is needed to ensure reliable performance of routine and emergency duties safely and effectively. Specify assistance. Case-by-case assessment.</p>	<p>No impairment to essential speech communication.</p>
<p>Vertigo/Vestibular dysfunction, e.g., Meniere’s disease and other forms of chronic or recurrent disabling vertigo</p> <p><i>Inability to balance, causing loss of mobility and nausea, loss of ability to perform duties per Enclosure (2).</i></p>	<p>T – During acute phase. P – Frequent attacks leading to incapacity.</p>	<p>G, D – As appropriate, if only capable of limited duties. L – If frequent, specialist surveillance required.</p>	<p>Low likelihood* of impairing effects while at sea.</p>

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Enclosure (4) to NVIC XX-XX

Enclosure (4): GUIDANCE ON SPECIFIC MEDICAL CONDITIONS

**Conditions not
specifically listed**

T – Until investigated and treated if indicated.

P – If permanently impairing.

G, D, L, M – Use analogy with related conditions as a guide. Consider the likelihood of sudden incapacitation, recurrence, or progression, and consider limitations on performing routine and emergency duties.

Use analogy with related conditions as a guide. Consider the excess likelihood of sudden incapacitation, recurrence or progression, and consider limitations on performing routine and emergency duties.
