



Advisory Circular

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Part 34 – Medical Standards

1. General

1.1 Purpose of advisory circulars

Maritime New Zealand (MNZ) advisory circulars are designed to give assistance and explanations about the standards and requirements set out in the maritime rules. However, the notes in advisory circulars should not be treated as a substitute for the rules themselves, which are the law.

If an advisory circular sets out how a rule can be satisfied, then compliance with that advice ensures compliance with the rule. Other methods of complying with the rule may be possible, however MNZ would first need to be satisfied that those alternative methods were of an equivalent standard to the advice in the advisory circular. The advisory circular would then be amended to include those equivalents.

This advisory circular 34-2 supports Maritime Rules Part 34 and when a number reference such as 34.8 is used it relates to a specific rule within Part 34.

1.2 Application of Rule Part 34

It is important to note that Maritime Rule 34 applies to:

- Section 1 applies to all seafarers under the age of 18 years on New Zealand ships other than restricted limit ships
- Section 2 applies to seafarers employed on ships that are required to comply with SOLAS 74 and to all holders of STCW certificates
- Section 3 applies to seafarers on foreign ships in New Zealand ports.

1.3 Purpose

This advisory circular is divided into two parts. The first part is for the attention of seafarers while the second is to provide information and guidance to medical practitioners and optometrists.

However the information in both parts may be useful to either party.

2. Supportive guidance to the rule part

2.1 Information for seafarers

2.1.1 Advice for those thinking about a career at sea

A career at sea requires that you be medically fit. It is strongly recommended that if you are contemplating a career at sea, you obtain a certificate of medical fitness before you commence training. If there are problems with your medical fitness it is better to identify these early on. This may save you investing time and money unnecessarily.

Colour vision is an important aspect of medical fitness for seafarers. Ship's navigation lights and aids to navigation (beacons and buoys) are coloured, as are warning lights on control panels and electrical wiring. It is possible to have problems with colour vision without being aware of them. Having your colour vision tested early is a wise precaution before commencing seafarer training.

2.1.2 Who needs a certificate of medical fitness for seafarers?

You need a seafarer's certificate of medical fitness if:

- You work on non-passenger ships over 500 gross tonnage
- You work on a passenger or non-passenger ship that is 45 metres or more in length and which operates outside restricted limits
- Your qualification is STCW endorsed
- You have a yacht qualification
- You work on passenger ships that go on international voyages
- You are under 18 years of age and the ship operates outside restricted limits

For those over 65 years of age holding non-STCW certificates

If you are over 65 years of age when applying for a new certificate of competency you can choose from the following two options:

You may choose to have your own general practitioner give you a reduced medical examination. This is different from a certificate of medical fitness. A form can be obtained from Maritime New Zealand (0508 22 55 22).

You may also choose to apply for a certificate of medical fitness from an approved medical practitioner. This is of a higher standard than the reduced medical and so is acceptable.

2.1.3 Categories of medical certificates

Medical certificates are issued in six categories.

Category number	Category name	Conditions
A	Unrestricted sea service	None
A(T)	Unrestricted sea service	Medical surveillance required at intervals Certificate is valid until the time that such surveillance is required
B	Restricted sea service only	Restrictions endorsed on the medical certificate
C	Temporarily unfit for sea service	Endorsed with number of weeks before the seafarer is re-examined
D	Indefinitely unfit for sea service	Endorsed with number of months before the seafarer is re-examined
E	Permanently unfit for sea service	Cannot work at sea

In the case of category 'A(T)', the expected duration of the seafarer's tour of duty should be taken into account when considering surveillance intervals.

For category 'B', the approved medical practitioner may stipulate that the seafarer's employment is restricted by certain conditions. These conditions could include shipping trades, geographical areas, types of ships or types of jobs, with time restrictions applied as appropriate.

2.1.4 Re-examination

If you have a B, C, D or E category certificate issued, the medical practitioner must immediately inform you that you are entitled to another examination. You should also be informed of any conditions that should be fulfilled before you re-apply for another examination.

You need to be re-examined by an approved medical practitioner before you start work if you:

- have been unable to work for 30 days or more due to illness or injury
- have been discharged or evacuated from a ship for health reasons

The Director can ask for a re-examination if she or he has doubts about your medical fitness.

2.1.5 Validity of certificates of medical fitness

Certificates of medical fitness are valid for two years, unless a shorter time is specified on the certificate. For people under 18 years of age a medical certificate is valid for one year.

2.1.6 How to find an approved medical practitioner or an approved optometrist

Lists are available on the Maritime New Zealand website www.maritimenz.govt.nz. You can also ring MNZ certification and ship registration on free phone 0508 22 55 22 or telephone + 64 4 473 0111 to obtain a list.

2.1.7 Right to information

The medical examiner should provide you with a copy of your Medical Examination Form.

2.1.8 What to take to a medical examination

Some form of photographic identification, such as your drivers licence, your maritime certificate, or a passport.

Your vaccination record if applying for a certificate that will be used in the unlimited area.

2.1.9 Eye and vision testing

What tests do I need?

Any eye and vision tests required can be found by referring to the relevant qualification in Maritime Rule part 32.

Who conducts eyesight and colour vision tests?

If you apply for a new deck certificate of competency or certificate of proficiency an approved optometrist must be used.

For engineering certificates and other seafarers who need a certificate of medical fitness the approved medical practitioner can conduct the vision and eyesight tests. The medical practitioner however may wish to have an approved optometrist examine your eyes and test your vision.

Where are lantern tests conducted?

Many of the deck certificates require a lantern test to be conducted by an approved optometrist.

The list of approved optometrists who are able to administer the lantern test may be found on the Maritime New Zealand website www.maritimenz.govt.nz in the seafarer licensing section.

Corrective lenses

If the certificate of medical fitness requires corrective lenses to be worn while performing watchkeeping duties, a spare pair must be conveniently located on board the ship.

Tinted glasses should not be used for lookout duties at night. This includes photochromic lenses that change their level of tinting as light levels change. During the time taken for the glasses to change their level of tinting, vision is obscured.

Validity of prescribed eyesight and colour vision tests

(Prescribed eyesight and colour vision tests are conducted by an approved optometrist)

If a seafarer wishes to gain a new certificate of competency requiring a prescribed letter test, they must hold a prescribed letter test pass less than 12 months old.

A prescribed colour vision test (or a colour vision test for a certificate of medical fitness) or a lantern colour vision test is valid for six years.

Revalidation of colour vision and eyesight tests

An Ishihara colour vision test can be revalidated by an approved medical practitioner as part of the medical examination.

Where a candidate holds a certificate of competency for which a lantern colour vision test was required for issue:

- This lantern colour vision test may be revalidated with an Ishihara colour vision test. However if this Ishihara colour vision test is failed a lantern colour vision test or special colour vision test must be taken (Appendix 5B.11).

Where a candidate wishes to apply for a new certificate of competency which requires a lantern colour vision test:

- A valid lantern colour vision test issued within the last six years should be held, or a new lantern colour vision test will be required.

Letter eyesight tests may be revalidated by the same test as originally required for the certificate concerned.

2.1.10 Eyesight standards

Eyesight standards for masters, mates, watchkeepers and lookouts (for certificates of competency and certificates of medical fitness)

Prescribed letter test

The seafarer must have unaided distance visual acuity in both eyes of at least 6/60.

For duties - the seafarer must have distance visual acuity in both eyes of at least 6/12. This may be attained by the use of corrective lenses if necessary.

Near vision must reach the standards required for ships navigation and visual fields should be normal.

Prescribed lantern colour vision test

The colour of each light must be correctly identified, with one incorrect answer being allowed.

Prescribed special colour vision test (can be taken if lantern colour vision test is failed)

The colour of each light must be correctly identified, with one incorrect answer being allowed.

Prescribed Ishihara plate colour vision test

Test with 24 plates, one incorrect answer allowed.

Test with 38 plates, two incorrect answers allowed.

Alternative colour vision standards

The Director must be satisfied that an equivalent standard to the lantern test is achieved.

Eyesight standards for engineer officers, ratings forming part of an engine room watch, radio officers, and electrical or electronic officers

The seafarer must have unaided distance visual acuity in both eyes of at least 6/60.

For duties – the seafarer must have distance visual acuity in both eyes of at least 6/15. This may be attained by the use of corrective lenses if necessary.

Near vision should be of a standard required to read instruments in close proximity, to operate equipment, and to identify systems components as necessary. Visual fields should be sufficient for duties.

Colour vision should meet the standard for the Ishihara colour vision test (Appendix 5A.9) or the Farnsworth saturated D15 test.

Monocular vision**Monocular vision for masters, mates, watchkeepers and lookouts**

The Director may accept monocular vision in the case of a currently qualified seafarer if he or she is satisfied that, after consulting with an approved optometrist, the seafarer can cope with the range of tasks likely to be encountered at sea. However, it is unlikely that a person with monocular vision, who has not previously worked at sea, will be approved to work in a deck capacity.

The seafarer must not show any evidence of serious or progressive disease in their good eye.

Distance visual acuity must be at least 6/60 without a corrective lens. For duties - distance visual acuity must be at least 6/6 which may be attained by use of a corrective lens if necessary.

Near vision must reach the standards required for ships navigation and visual fields should be normal.

Ongoing monitoring and reporting requirements may be placed on the certificate of medical fitness. Applicants are recommended to contact certification and ship registration at Maritime New Zealand before making an application (0508 22 55 22 or 04 473 0111).

Monocular vision for engineer officers, ratings forming part of an engine room watch, radio officers, and electrical or electronic officers

Distance visual acuity must be at least 6/60 without a corrective lens. For duties - distance visual acuity must be at least 6/9 which may be attained by use of a corrective lens if necessary.

Near vision should be of a standard required to read instruments in close proximity, to operate equipment, and to identify systems components as necessary. Visual fields should be sufficient for duties.

For both deck and engine duties, where a seafarer loses sight in one eye, an application for medical examination cannot be made until at least six months have passed since the loss of sight.

Eye surgery

Following refractive or cataract corrective eye surgery a seafarer must wait three months before having his or her visual acuity tested by an approved optometrist. Only when the visual acuity standards are met can the seafarer return to seagoing employment.

Colour vision aids

An examinee must not use colour vision aids when taking any colour vision test, including red-tinted, chromas lenses, and chromagen lenses.

2.2 Information for medical practitioners and optometrists

This information supplements that contained in appendices 1, 2 and 3 of Maritime Rule Part 34: Medical Standards.

2.2.1 How to become an approved medical practitioner or an approved optometrist

Those interested in becoming an approved medical practitioner or optometrist should, in the first instance, contact Certification and Ship Registration at Maritime New Zealand (0508 22 55 22 or 04 473 0111).

An approved medical practitioner must be registered and have experience relevant to assessing that seafarers are fit for the types of duties they are likely to encounter at sea. The medical practitioner must be professionally independent from employers, seafarers, and employer and seafarer representatives.

Approved optometrists must be registered and have the knowledge and equipment necessary to conduct the appropriate tests.

Approvals are valid for five years.

2.2.2 Principal Medical Officer

Maritime New Zealand has a Principal Medical Officer and can provide you with his contact details. He may be contacted for medical issues which require special guidance. These might include unusual medical conditions where the seafarer's ability to work at sea is unclear.

2.2.3 Procedure

Identification

The seafarer must show you some form of official photographic identity, such as a passport, a maritime qualification or a driver's licence. Record the document type and number on the certificate of medical fitness or eyesight test report. If a passport is used, please record the country of issue.

Right to privacy

All persons concerned with the conduct of medical examinations, including those who come in contact with medical examination forms, laboratory results and other medical information, should ensure the right of privacy of the examinee. Maritime New Zealand notes that these requirements are covered by the privacy principles stated in the Privacy

Act 1993. These can be downloaded from <http://www.privacy.org.nz/the-privacy-act-and-codes/>.

Medical examination reports should be marked as confidential, and all medical data collected from a seafarer should be protected. This is covered by Appendix 2, 2.2 (13) of maritime rule Part 34 and the Privacy Act 1993.

Medical records should only be used for determining the fitness of the seafarer for work and enhancing health care. Use and disclosure of medical records is addressed in the Privacy Act 1993 and the Health Information Privacy Code 1994.

The seafarer has the right to access and to receive a copy of his/her medical data.

Charges

Maritime New Zealand is not involved in setting examination charges. If you are asked to re-examine a seafarer who has not been able to work at sea due to illness or injury, please exercise your judgement in determining the extent of the re-examination necessary, and therefore the charge made for this.

2.2.4 Standards of medical fitness

IMO Guidance

The following table and accompanying notes come from recommended guidance for medical assessment of seafarers from the International Convention on Standards of Training, Certification and Watchkeeping (STCW) issued by the International Maritime Organization (IMO). (STCW Code Table B-1/9). Please consider it when assessing seafarer medical fitness.

Shipboard task, function, event or condition	Related physical ability	A medical examiner should be satisfied that the candidate
Routine movement around vessel: <ul style="list-style-type: none"> on moving deck between levels between compartments <p><i>Note 1 applies to this row</i></p>	Maintain balance and move with agility Climb up and down vertical ladders and stairways Step over coamings (Load Line Convention requires coamings to be 600 mm high) Open and close watertight doors	Has no disturbance in sense of balance. Does not have any impairment or disease that prevents relevant movements and physical activities Is, without assistance, able to : <ul style="list-style-type: none"> limb vertical ladders and stairways step over high sills manipulate door closing systems
Routine tasks on board: <ul style="list-style-type: none"> Use of hand tools Movement of ship's stores Overhead work Valve operation Standing a four-hour watch Working in confined spaces Responding to alarms, 	Strength, dexterity and stamina to manipulate mechanical devices. Lift, pull and carry a load (eg 18 kg) Reach upwards Stand, walk and remain alert for an extended period Work in constricted spaces and move through restricted openings (e.g., SOLAS requires minimum openings in	Does not have a defined impairment or diagnosed medical condition that reduces ability to perform routine duties essential to the safe operation of the vessel. Has ability to: <ul style="list-style-type: none"> work with arms raised stand and walk for an extended period enter confined spaces

<p>warning and instructions</p> <ul style="list-style-type: none"> • Verbal communication <p><i>Note 1 applies to this row</i></p>	<p>cargo spaces and emergency escapes to have the minimum dimensions of 600 mm x 600 mm – e.g., SOLAS Regulation 3.6.5.1)</p> <p>Visually distinguish objects, shapes and signals</p> <p>Hear warnings and instructions</p> <p>Give a clear spoken description</p>	<ul style="list-style-type: none"> • fulfil eyesight standards (A-I/9) • fulfil hearing standards set by competent authority or take account of international guidelines • hold normal conversation
<p>Emergency duties on board:</p> <ul style="list-style-type: none"> • Escape • Fire-fighting • Evacuation <p><i>Note 2 applies to this row</i></p>	<p>Don a lifejacket or immersion suit.</p> <p>Escape from smoke-filled spaces.</p> <p>Take part in fire-fighting duties, including use of breathing apparatus.</p> <p>Take part in vessel evacuation procedures.</p>	<p>Does not have a defined impairment or diagnosed medical condition that reduces ability to perform emergency duties essential to the safe operation of the vessel.</p> <p>Has ability to:</p> <ul style="list-style-type: none"> • don lifejacket or immersion suit • crawl • feel for differences in temperature • handle fire-fighting equipment • wear breathing apparatus (where required as part of duties)

Table 1 Assessment of minimum entry level and in-service physical abilities for seafarers

Notes

1. Rows 1 and 2 of the above table describe (a) ordinary shipboard tasks, functions, events and conditions, (b) the corresponding physical abilities which may be considered necessary for the safety of a seafarer, other crew members and the ship, and (c) high-level criteria for use by medical practitioners assessing medical fitness, bearing in mind the different duties of seafarers and the nature of shipboard work for which they will be employed.
2. Row 3 of the above table describes (a) ordinary shipboard tasks, functions, events and conditions, (b) the corresponding physical abilities which should be considered necessary for the safety of a seafarer, other crew members and the ship, and (c) high-level criteria for use by medical practitioners assessing medical fitness, bearing in mind the different duties of seafarers and the nature of shipboard work for which they will be employed.
3. This table is not intended to address all possible shipboard conditions or potentially disqualifying medical conditions. Parties should specify physical abilities applicable to the category of seafarers (such as “Deck officer” and “Engine rating”). The special circumstances of individuals and for those who have specialized or limited duties should receive due consideration.

4. If in doubt, the medical practitioner should quantify the degree or severity of any relevant impairment by means of objective tests, whenever appropriate tests are available, or by referring the candidate for further assessment.
5. The term “assistance” means the use of another person to accomplish the task.
6. The term “emergency duties” is used to cover all standard emergency response situations such as abandon ship or fire fighting as well as the procedures to be followed by each seafarer to secure personal survival.

2.2.5 Eyesight Standards

Eyesight standards, which are in Appendix 5A of Maritime Rule Part 34 must be met.

Additional eyesight, colour vision test and revalidation information is supplied in parts 2.1.9 and 2.1.10 of this Advisory Circular.

Procedures for the conduct of eye and vision tests are in Appendix 5B of Maritime Rule Part 34.

2.2.6 Normal visual fields

The seafarer should be referred to an approved optometrist if there is doubt about the completeness of visual fields. This includes situations where the seafarer has a history of stroke or transient ischaemic attack, where medication is used as a consequence of having diabetic retinopathy or glaucoma, or the seafarer draws attention to any visual problems.

The required visual fields are specified as ‘normal’ or sufficient for duties. MNZ has had expert advice that 120 degree horizontal fields meets the criteria of normal visual fields. MNZ notes that while 140 degrees is used at times, in practice there is not a lot of difference. Using 140 degrees would adversely impact on employment opportunities for little gain.

2.2.7 Near vision

Seafarers working on the bridge are required to read paper and electronic charts and reference material. Engineers are required to read instruments in close proximity. For seafarers required to read charts and weather maps near vision should be at least N8. For other seafarers, such as those working on the deck of a ship or in the engine room, near vision should be sufficient to perform the full range of tasks they have in the work environment.

2.2.8 Obesity

The primary concern with obesity is the ability of the seafarer to move quickly in an emergency and to be able to move through standard hatches. Where you have doubts about a seafarer’s ability to move quickly in such situations, a functional assessment could be sought from an occupational physician or occupational therapist. Obesity is also a trigger to examine for obstructive sleep apnoea.

2.2.9 Drug interactions

You should ensure that the seafarer is not taking any medication (prescribed or over the counter, including complementary medicines) that will impair judgement, balance or any other requirements for effective and safe performance of routine and emergency duties on board.

2.2.10 Sleep disorders

Sleep disorders can have significant negative impact on a seafarer’s wellbeing and safety. If not identified and treated the safety of the seafarer and others is at considerable risk, as may be the health of the seafarer.

Seafarers often work in conditions that result in insufficient sleep. Sufficient time may not be allowed for adequate sleep, sleep opportunities can be at times of the day that are not compatible with sleeping and sleeping conditions are often sub-optimal, resulting in poor quality sleep. Fatigue is something that can be expected to be part of a seafarer's life, from time to time. However, as with the rest of the population, seafarers may also have a sleep disorder, which will be exacerbated by working and sleeping conditions.

It is not known what proportion of fatigue-related accidents are associated with sleep disorders. The most common sleep disorders are insomnia, obstructive sleep apnoea (OSA) and narcolepsy.

While we all sleep, most people do not understand the dynamics of sleep. Information, supplemented with non-invasive therapies if appropriate, are the cornerstone of successful intervention. Maritime New Zealand has prepared material on seafarer fatigue for seafarers and a copy should have been sent to you. The posters are designed to be used in a one to one situation and you may find them useful in explaining circadian rhythms and homeostatic sleep pressure and the implications for safety. (These can be downloaded from www.maritimenz.govt.nz – search on fatigue posters.)

Contact MNZ if you require additional materials.

Obstructive sleep apnoea (OSA)

OSA occurs when the person temporarily stops breathing while sleeping. Usually the muscles that hold the upper airway open stop working and the airway closes, preventing breathing. This triggers an awakening response, which can be accompanied by a loud snort or gasp. This can repeat itself several hundred times per night. The sleeper cannot obtain deep restful sleep. As a consequence, daytime sleepiness is the main symptom of OSA.

Most of our knowledge about risk to safety from OSA, comes from motor vehicle studies, especially commercial drivers. OSA increases the risk of a traffic accident from about 2-7 times. There are no studies on its prevalence amongst seafarers. OSA can be successfully treated for the majority of sufferers.

While OSA is prevalent in some 2 to 4 percent of the general population it is estimated to be prevalent in some 26 to 50 percent of professional drivers. It seems reasonable to assume that the incidence of OSA amongst seafarers is nearer that of professional drivers than the general population. With an aging work population, OSA is something that medical practitioners can expect to find amongst a reasonable proportion of seafarers presenting for examination. Maori have higher levels of breathing disturbances (three times) during sleep than non-Maori.

Risk factors include age (being middle aged is high risk) and neck circumference. A large neck circumference probably indicates additional fatty tissues in the neck, which assists the neck to shut down breathing, when the neck muscles fail to keep the airway open.

It has been shown that sleep histories fail to uncover OSA in the vast majority of instances, when a person's livelihood is at stake. The seafarer's livelihood rests on the outcome of the medical assessment and the medical practitioner usually only has the seafarer's self reports to go on. A Joint Task Force of the American College of Chest Physicians, American College of Occupational and Environmental Medicine, and the National Sleep Foundation recommended assessment methods to detect OSA in commercial motor vehicle drivers. The assessment method brings together a number of indicators, with the physician using these as a whole to determine if the person *may* have an OSA problem. Physician diagnosis should be conservative, with referral to a sleep laboratory to confirm the diagnosis if OSA is suspected. The recommended indicators are:

- any reported signs of pauses in breathing or loud snoring while sleeping. Have bed partners or others commented on this?
- reported daytime sleepiness

- a history of motor vehicle crashes or near misses that are likely to be related to sleep disturbances (run off the road, at fault, rear-end collision). In the maritime context, any incidents or accidents that may reflect sleepiness.
- Epworth Sleepiness Scale score greater than 15. However, note that in a situation where the seafarer believes his or her job is at stake, a high score is unlikely, even if the seafarer has a sleep problem.
- Does the seafarer fall asleep while in the waiting room?
- Two or more of the following:
 - BMI equal to or greater than 35
 - neck circumference equal to or greater than 43 cm for men and 40 cm in women. Additionally, is there obstruction of the upper airway due to enlarged tonsils?
 - hypertension (new, uncontrolled or requiring two or more medications for control)

If the seafarer provides a history of excessive sleepiness, a history of sleep-related incidents or accidents, or there is unexplained observed sleepiness on examination, the seafarer should be declared temporarily unfit for sea service (category C). The restriction would be removed following specialist examination and successful completion of treatment, if required.

If the seafarer presents a history that suggests he or she may have OSA a category B or AT restriction is recommended. The seafarer should be required to attend a sleep clinic for specialist assessment.

Treatment for OSA is usually by CPAP (Continuous Positive Airway Pressure) machine. CPAP machines are recommended to be used all night, every night indefinitely. It is important to ensure that the seafarer has the ability to use the CPAP machine in all sleeping situations. If he or she sleeps on board a ship, is the sleeping accommodation suitable for CPAP use without disturbance to other crew members? Are spares available if the machine breaks down? Other crew members will need to be aware of the nature of the condition and the effectiveness of the treatment.

About 40 percent of users have difficulty with long-term use of CPAP machines. In the context of seafarer medical fitness this means that CPAP use must be monitored, to ensure that there is continued use. The medical practitioner may wish to consult with the sleep clinic as to the best way to monitor CPAP use and assist the seafarer with solving problems with its ongoing use. If there are problems with ongoing use, medical supervision will be required.

Insomnia

This is the most common reported sleep problem. It is a set of symptoms, including trouble falling asleep, repeatable waking up, having trouble getting back to sleep, waking too early in the morning and having non-refreshing sleep. Causes range widely and can be environmental, physical and psychological. Symptoms increase with age and are especially prevalent amongst those who have other health complaints. It is twice as common amongst shift workers than the general population. Compared to those without insomnia, insomnia sufferers have around a three times increased risk of a road traffic accident. Insomnia may be short or long-term and may exist on its own or arise due to other causes.

As insomnia can arise from several different causes, diagnosis is important. Diagnosis should include a complete medical history, a description of the symptoms and the causes of any stress in the seafarer's life. It may be useful to ask the seafarer to keep a sleep diary for two weeks. If a sleep diary is kept, obtaining the bed partner's observations can be useful. Other sleep disorders should be eliminated before a diagnosis of insomnia is arrived at. This may require assessment at a sleep clinic. If underlying problems are identified they should be the primary target of intervention. Once underlying conditions have been eliminated, the preferred method of treatment is the use of a behavioural therapy, such as cognitive behavioural therapy (CBT). The MNZ brochure *Understanding*

fatigue contains advice on developing a sleep routine. If drugs are used the seafarer should be warned of the possibility of rebound insomnia when their use is discontinued.

Your examination should include an assessment of how the seafarer's insomnia interacts with his or her job and how this may impact on maritime safety. Give careful consideration to times of day which naturally encourage sleep and which are likely to interact with tiredness from insomnia. Consider whether any restrictions should be placed on the seafarer's work. Ongoing medical surveillance and/or restrictions may be warranted.

Narcolepsy

Narcolepsy sufferers are extremely sleepy during the day, may have cataplexy during the day and hallucinations and sleep paralysis during sleep. It is unlikely that all four symptoms will be present. It is difficult to diagnose, with symptoms often being present for 10 to 15 years prior to a diagnosis being made. There is no cure for narcolepsy, though symptoms can be relieved. It is recommended that the seafarer is assessed by a sleep specialist if narcolepsy is suspected.

Seafarers who are watchkeepers or who spend days at sea should be assessed as Grade E, permanently unfit for sea service. It may be appropriate to assess some seafarers who have a non-watchkeeping role in coastal waters as capable of working, if specialist treatment confirms they have responded well to treatment and are maintaining treatment.

Sleep reference material

The following were key documents in developing this advice on sleep problems.

Caldwell, J. A. et al. Fatigue countermeasures in aviation. *Aviation, Space and Environmental Medicine*, 2009, 80, 29-59.

Gander, P. *Sleep in the 24 – Hour Society*. The Open Polytech of New Zealand. 2003.

Hartenbaum, N. et al. Sleep Apnea and Commercial Motor Vehicle Operators: Statement from the Joint Task Force of the American College of Occupational and Environmental Medicine, and the National Sleep Foundation. *Journal of Occupational and Environmental Medicine*, 2006, 48, S1-S3.

Smolensky, M. H. et al. Sleep disorders, medical conditions, and road accident risk. *Accident Analysis and Prevention*, 2011, 43, 533 – 548.

2.2.11 Marginal decisions

Medical examinations of seafarers are about managing significant risks to the health and welfare of seafarers. Sick seafarers not only endanger their own health and safety. With many ships having minimal crewing they can place a substantial burden on their shipmates. You are encouraged, if there is doubt, to err on the side of caution when issuing a seafarer with a certificate of medical fitness. While this may be difficult when the decision is marginal, priority should be given to the potential consequences when outside medical assistance cannot be obtained for some days, or where the seafarer may impose an immediate danger to others.

Please note that any and every member of a ship's crew must be capable of taking an active part in the day to day running of the ship and particularly, in dealing with emergencies, such as fighting fires and abandoning ship.

Consideration should be given to the following factors:

- the potentially hazardous nature of seafaring, which calls for a high standard of health and continuing fitness;
- the restricted medical facilities likely to be available on board ship. Few ships carry doctors, medical supplies are limited and unless a ship is in port there will be delay before full medical treatment is available;

- the possible difficulty of providing/replacing required medication. As a rule, a seafarer should not be accepted for service if the loss of a necessary medicine could precipitate the rapid deterioration of a medical condition;
- the confined nature of life on board ship and the need to be able to live and work in a closed community;
- the limited crew complements which mean that illness of one crew member may place a burden on others or impair the safe and efficient working of the ship;
- the potential need for crew members to play a role in an emergency or emergency drill, which may involve strenuous activity in adverse conditions;
- since many seafarers will need to join and leave ships by air, they should be free from any condition which precludes air travel or could be seriously affected by it, such as pneumothorax or conditions which predispose to barotraumas.

2.2.12 Examination process

Medical examination form – seafarer’s declaration

While the seafarer is required to complete this form, Maritime New Zealand strongly recommends that it be completed with the assistance of medical staff, preferably the approved medical practitioner. This allows for issues raised by questions to be explored.

Medical examination form – eyesight standards

The results of eye and vision tests conducted by approved medical practitioners must be recorded on the Certificate of Medical Fitness for Seafarers.

Specialist assessment

You can obtain specialist testing or advice to supplement your examination, if you have doubts about some aspect of the seafarer’s medical fitness. The seafarer is responsible for any charges associated with additional testing or assessment. Areas where you might seek additional testing or assessment include chest X-rays, hearing, vision, sleep problems, diabetes, epilepsy and alcohol and drug issues.

When completing the medical examination form the seafarer should give you permission to seek additional information from other health professionals.

Medical categories and expiry dates

At the completion of your examination you assign the seafarer to one of the following categories.

Grade A means the seafarer is fully fit for unrestricted sea service and the expiry date should therefore be the maximum allowed.

Grade A(T) shows the seafarer needs medical supervision, which should be specified. The period of validity of the certificate is up to your discretion, and may range from the maximum downwards. There may also be restrictions on the nature or area of allowable sea service

Grade B means there are restrictions on the seafarer which you specify on the certificate. These may be restrictions such as ‘restricted to NZ coastal waters only’. The period of validity is up to your discretion and will range from 2 years downwards.

Grade C: the seafarer is considered temporarily unfit for sea service. The length of time (weeks) before, or the date after which, the seafarer may be re-examined must be stated on the certificate.

Grade D: the seafarer is considered indefinitely unfit for sea service. The length of time (months), or the conditions to be met, before the seafarer can be re-examined must be stated on the certificate.

Grade E: the seafarer is considered permanently unfit for sea service.

The subnotes 3 and 4 of rule 34.8 offer some guidance concerning the application of medical categories.

In general, the seafarer's personal circumstances and nature of work should be taken into consideration along with their medical conditions.

Length of tour of duty can be an important factor, as can the type of duties expected, as well as type of vessel. A seafarer's work can vary greatly according to his or her position on board. Some vessels have work conditions which can be considerably more cramped and arduous than others.

Geographical location can greatly affect factors such as the temperatures and sea conditions which are likely to be encountered.

While some of these situations may not be altogether predictable, the seafarer should normally be able to give a reasonable idea of what he or she expects to encounter during a voyage.

Entitlement to re-examination

If a seafarer is issued a certificate of medical fitness with a medical category B, C, D or E the seafarer is entitled to apply to the Director for a further examination. This examination will be by an approved medical practitioner nominated by the Director.

You must inform seafarers at the time of their examination of their right to a further examination, if they fail. The seafarer should write to:

Director of Maritime New Zealand
PO Box 27006
Wellington 6141

If appropriate, provide the seafarer with a report indicating what he or she needs to do before re-applying for a further examination. Indicate if there are any medical or other reports that should be provided in support of the application.

Administration

Please ensure that all certificates of medical fitness have an expiry date on them. If this is absent it can make life difficult for seafarers when seeking work. Unless you have good reason to choose a closer date, certificates of medical fitness are valid for two years, except if a seafarer is under 18 years of age and works outside restricted limits, when it should be one year.

Please stamp the certificate with your official stamp.

Give the seafarer the white (seafarer) copy of both forms. Send the completed and stamped yellow copy of the certificate of medical fitness to:

Certification and Ship Registration
Maritime New Zealand
PO Box 27006
Wellington 6141

Retain your copies for ten years. We recommend that they be filed in such a way that they can be readily retrieved if necessary.

General Enquiries

Free phone: 0508 22 55 22 (New Zealand only)

Phone: +64 4 473 0111

Fax: +64 4 494 1263

Email: enquiries@maritimenz.govt.nz

All current rules and advisory circulars can be found on our website www.maritimenz.govt.nz.
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