

LP 18/2025 Prevention of Occupational Diseases among Seafarers

Seafarers have to deal with numerous challenges during their time on board, typically with increased stress and an unusual lifestyle and impacting their physical wellbeing. This not only affects the safety of the seafarers but also threatens the safe operation of ships. The author went through recent cases of crew illness reported to the company and outlined a dozen typical diseases. These data reflect the many health challenges during navigation and highlight the importance of ensuring the physical and mental wellness of seafarers.

I. Common Types of Diseases

Based on the cases from 2020 to 2025, the common diseases among seafarers can be summarized into 7 categories, sorted by frequency of occurrence as follows:

1. Urinary System Diseases

- (1) Kidney stones/ Ureteral stones
- (2) Urinary tract infection/ Pyelonephritis

2. Digestive System Diseases

- (1) Appendicitis
- (2) Stomach diseases/ Digestive tract diseases
- (3) Intestinal obstruction/ Gastrointestinal bleeding

3. Musculoskeletal and Joint Sprains

- (1) Fractures/ Bone cracks
- (2) Lumbar disc herniation/ Strain
- (3) Arthritis/ Tenosynovitis

4. Respiratory and Infectious Diseases

- (1) Pneumonia/ Respiratory tract infection
- (2) Malaria/ Dengue fever
- (3) Acute hepatitis

5. Cardiovascular and Nervous System Diseases

(1) Cardiovascular and cerebrovascular diseases

(2) Angina pectoris/ Hypertension

6. Mental Health Problems

(1) Depression/ Anxiety disorders

(2) Sleep disorders

7. Other Diseases

(1) Facial paralysis/ Neuritis

(2) Skin and ophthalmic diseases

(3) Oral/ Dental diseases.

II. Analysis on Causes

1. Environmental Factors

1) Humidity: Prolonged exposure to damp conditions increases susceptibility to rheumatism, joint swelling, and pain.

2) Confined Living/Working Spaces: Shared living essentials heighten the risk of cross-infection, particularly for respiratory and contagious diseases.

2. Occupational Factors

1) Unbalanced Diet: Intake of foods high in protein and purines and insufficient intake of vegetables and fruits can contribute to conditions like hypertension, hyperlipidaemia, hyperglycaemia, fatty liver disease, and more likely cardiovascular diseases such as cerebral infarction and angina.

2) Inadequate Hydration: Insufficient water intake, high-salt diets, and sitting too long increase susceptibility to kidney stones, ureteral stones, and urinary tract infections.

3) Heavy Labour: Repetitive and forceful movements of heavy things and work related to slippery deck surfaces, combined with ship rocking can lead to Musculoskeletal Disorders such as lumbar disc herniation, joint strain, and fractures.

4) Physiological Disruptions: Chronic stress, irregular work shifts, erratic eating patterns, sudden changes in air pressure/temperature during voyages, and seasickness from rough seas

collectively contribute to chronic gastritis, peptic ulcers, acute appendicitis, cholecystitis, and intestinal obstruction.

5) Psychological Strains: Long-term social isolation, monotonous living conditions, hazardous/confined work environments, and disrupted biorhythms have caused a significant rise in mental health issues such as depression and anxiety among seafarers in recent years.

3. Voyage-Specific Factors

1) Exposure to Global Epidemics: Ocean-going vessels calling different ports increase seafarers' risk of contracting region-specific diseases (e.g., malaria in Africa, dengue fever in South-east Asia, yellow fever in Brazil). Port quarantine policies further complicate repatriation procedures for infected crew members.

2) Limited Medical Resources: Inadequate on-board medical facilities and difficulties in arranging timely shore treatment often result in escalation of ailments into severe conditions.

III. Preventing Seafarers' Shipboard Diseases

The health of seafarers impacts not only the safe navigation of vessels but also the sustainable development of the shipping industry. Therefore, rigorous implementation of preventive measures is essential to ensure their physical and mental well-being and safety.

1. Pre-Boarding

1) Comprehensive Health Screening

Enhance pre-employment medical examinations with stringent standards, process management, and health record tracking. Ensure that seafarers are sent on board safe and healthy.

2) Health Education

Conduct pre-boarding health education on common diseases and their causes, symptoms, and emergency response protocols. Teach basic self-monitoring techniques, enabling them to assess their physical condition through observations of appearance, skin colour and sensations.

3) Vaccination Protocols

Administer vaccines based on the vessel's intended ports of call to prevent region-specific infectious diseases.

2. During the voyages

1) Improve Dietary Structure and Food Hygiene

Develop balanced meal plans for long voyages and replenish fresh fruits and vegetables

during port calls. Enforce strict hygiene standards for food storage, processing, preparation, kitchen sanitation, and utensil disinfection.

2) Equip Adequate Medications and Emergency Equipment

In addition to complying with international conventions for medical supplies, equip vessels with emergency cardiac care devices to extend the window for shore-based rescue in case of acute illnesses.

3) Strengthen Routine Health Monitoring

Regularly check the crew's weight, temperature, and blood pressure, with comparative analysis of data records. Promote mental health awareness and monitor crew members' emotional states. Captains should promptly address significant behavioural changes, provide support, and coordinate with the company or shore-based mental health professionals for severe cases, including potential repatriation if conditions persist.

4) Positive Guidance and Well-being Initiatives

Prioritize crew morale through emotional support, recognition of individual contributions, and opportunities for personal development. Organize leisure activities and physical exercises.

5) Remote Medical Support

Establish partnerships with designated telemedicine providers and ensure reliable ship-to-shore communication channels to deliver professional, round-the-clock assistance.

6) Health Awareness Campaigns

Continuously educate crew on seafaring health care, psychology, and infectious disease prevention, to foster strong health protection awareness.

7) Emergency Response Drills

Develop contingency plans for critical illnesses, infectious outbreaks, and mental health crises, and conduct regular drills to ensure crew proficiency in emergency protocols.

8) Proactive Infectious Disease Prevention

Shipowners and operators must thoroughly research prevalent or emerging infectious diseases at scheduled ports. Implement preventive measures such as gangway controls, food/water source management, and crew safety briefings when operating in high-risk areas to minimize exposure and transmission risks.

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