

Maritime Technology and Human Health Facts

Maritime Technology · Practice Test · 15 Questions

1. What physiological condition is most commonly associated with prolonged exposure to low-frequency vibrations from ship engines and machinery?

- A) Increased bone density
- B) Enhanced proprioception
- C) Motion sickness
- D) Hand-arm vibration syndrome (HAVS)

2. In a submarine environment, what is the primary health risk associated with prolonged rebreathing of exhaled air without adequate CO2 scrubbing?

- A) Hyperoxia
- B) Carbon dioxide narcosis
- C) Hypoxia
- D) Nitrogen narcosis

3. Exposure to significant G-forces during naval operations, such as high-speed maneuvers or catapult launches, can lead to a physiological response known as 'G-LOC'. What does G-LOC stand for?

- A) Gravitational Limit of Consciousness
- B) Gravity-induced Loss of Control
- C) G-force Induced Loss of Consciousness
- D) Gravitational Impact on Central Organism

4. What is the primary mechanism by which a hypobaric chamber, used in naval diving training, helps acclimatize divers to pressure changes?

- A) Simulating high atmospheric pressure
- B) Increasing oxygen partial pressure
- C) Gradually increasing ambient pressure
- D) Reducing atmospheric nitrogen levels

5. To mitigate the effects of long-term isolation and confinement on psychological well-being in submarines, what technological intervention is often implemented regarding lighting?

- A) Constant, bright white light
- B) Dim, red lighting
- C) Simulated circadian rhythm lighting
- D) No artificial lighting

6. What common maritime health issue is exacerbated by continuous exposure to wind and saltwater, leading to skin dryness, cracking, and inflammation?

- A) Photosensitivity
- B) Dermatitis
- C) Xerosis cutis
- D) Melanoma

7. When working in noisy engine rooms on ships, what is the recommended method for preventing noise-induced hearing loss?

- A) Using earplugs only during maintenance
- B) Wearing hearing protection devices consistently
- C) Increasing the distance from the noise source
- D) Using noise-canceling headphones only for communication

8. The phenomenon of 'space adaptation syndrome' in astronauts is analogous to what common maritime health issue experienced by passengers and crew on vessels?

- A) Seasickness
- B) Seabed sickness
- C) Deck sickness
- D) Port sickness

9. What specific type of radiation, often shielded against in modern naval vessels, can penetrate deep into tissues and damage DNA?

- A) Infrared radiation
- B) Ultraviolet radiation
- C) Ionizing radiation
- D) Microwave radiation

10. In the context of maritime emergency medical equipment, what is the primary physiological benefit of a positive-pressure breathing apparatus (PPBA) for a victim of smoke inhalation?

- A) To induce hyperventilation
- B) To deliver a higher concentration of oxygen
- C) To increase carbon dioxide levels
- D) To reduce heart rate

11. What physiological change is the body attempting to achieve through the process of acclimatization to cold water immersion, often practiced by naval personnel?

- A) Increased blood flow to extremities
- B) Reduced metabolic rate
- C) Conservation of core body temperature
- D) Increased perspiration

12. Prolonged exposure to the visual demands of navigating at sea, particularly in low light or fog, can lead to what common ocular condition?

- A) Presbyopia
- B) Night blindness
- C) Eye strain and fatigue
- D) Macular degeneration

13. What is the main purpose of anti-exposure suits used by maritime personnel in cold waters?

- A) To increase buoyancy
- B) To provide thermal insulation and prevent hypothermia
- C) To improve visibility to rescuers
- D) To reduce drag in the water

14. In a confined maritime environment with limited fresh water, what is a significant health concern related to the use of desalinated seawater for drinking if not properly treated?

- A) Excessive sodium intake
- B) Dehydration due to electrolyte imbalance
- C) Increased risk of scurvy
- D) Mineral deficiency leading to osteoporosis

15. What physiological system is most directly affected by the vestibular disturbances caused by the rolling and pitching motions of a ship?

- A) Digestive system
- B) Respiratory system
- C) Nervous system (specifically the balance and coordination centers)
- D) Endocrine system