

## COMBATting



# MALARIA AT SEA

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Dr. Jane Olivier brings her expertise to address the crucial issue of malaria in maritime settings. With extensive experience in treatment of malaria, Dr. Olivier emphasises the importance of proactive measures in combatting this life-threatening disease.

The maritime industry has been grappling with the impacts of malaria, as evidenced by the concerning trend highlighted by Britannia P&I. The Club's claims department reported a rise in malaria claims and an upward trend in costs incurred over the past five years, driven by an increase in deaths due to malaria. This concerning pattern highlights the urgent need for heightened awareness and proactive measures to confront malaria effectively.

## PREVENTION IS KEY

Preventing malaria requires a multi-faceted approach, including taking anti-malarial medications and further precautions to avoid being infected by mosquitoes. Common measures to prevent malaria include:

- Using Environmental Protection Agency-registered insect repellent
- Wearing long sleeves and trousers
- Applying a permethrin spray on clothes
- Using a mosquito net when sleeping
- Always clearing stagnant water.

While prophylactic medications available in the form of tablets exist, they come with their own set of challenges. These include side effects such as nausea, sun sensitivity, diarrhoea, vomiting and sleep disturbances which subsequently can impact a seafarer's mental health while on board. Larium (mefloquine) is also strongly discouraged due to the mental health side effects it has including anxiety, depression, paranoia and hallucinations. The costs for prophylactic medication are also high.

It's worth noting that a malaria vaccine is now available, though not yet widely accessible. The disadvantage for seafarers is that it requires three vaccinations over a one-year period, followed by another dose one year later. For this reason, it may be difficult to administer all doses of the vaccinations to crew who are at sea.

## RECOGNISING THE SYMPTOMS

Early detection of malaria symptoms is critical for timely intervention. The early symptoms can include a cold, headache and a high temperature. However, some individuals, especially those who have previously been infected with malaria, may only experience minor symptoms.

Other symptoms can include:

- Flu-like symptoms such as fevers, muscle and joint aches
- Fatigue
- Nausea, vomiting, diarrhoea and abdominal pains
- Dark or blood coloured urine
- Confusion
- Seizures and loss of consciousness
- Coughing and difficulty breathing
- Jaundice.

Severe malaria can cause complications within hours to days from the initiation of symptoms such as:

- Cerebral malaria
- Severe anaemia
- Decreased blood sugar levels
- Acute renal failure
- Pulmonary edema.

Given the overlap of symptoms with other illnesses such as COVID-19 and the flu, diagnostic testing becomes imperative, with rapid diagnostic tests being the most practical option for ships at sea. Any flu-like illness should be assumed as malaria until proven otherwise. Therefore, testing every crew member presenting flu-like symptoms is obligatory, with or without a fever.

**MALARIA REMAINS A SIGNIFICANT CONCERN FOR CREW AND SHIPOWNERS, WITH ITS POTENTIAL TO CAUSE FATALITIES AND INCUR SUBSTANTIAL COSTS. THEREFORE, IT IS KEY THAT SHIPOWNERS HAVE THE RELEVANT KNOWLEDGE AND TAKE PROACTIVE MEASURES TO MITIGATE ITS IMPACT.**

**MALARIA, CAUSED BY THE PLASMODIUM PARASITE TRANSMITTED THROUGH THE BITE OF INFECTED FEMALE ANOPHELES' MOSQUITOES, IS A LIFE-THREATENING DISEASE. ACCORDING TO THE WORLD HEALTH ORGANIZATION (WHO), IN 2022 THERE WERE AN ESTIMATED 249 MILLION MALARIA CASES AND 608,000 MALARIA DEATHS IN 85 COUNTRIES.**

## TREATMENT PROCEDURES

The good news is that malaria is 100% treatable if diagnosed and treated promptly. Early diagnosis of malaria is crucial for effective treatment and preventing complications. Rapid Diagnostic Tests (RDTs) are quick, easy to use and essential for shipboard testing. These finger-prick blood tests can detect the presence of malaria parasites within 15-20 minutes. While microscopic examination and serological tests are more accurate, they require a laboratory setting and are not practical for use on board vessels.

WHO provides clear guidelines for the treatment of malaria, emphasising the use of artemisinin-based combination therapies (ACT) for uncomplicated cases. In situations where severe malaria is suspected, pre-referral treatment with intramuscular injections becomes necessary. Ensuring access to oral and injectable treatments on board vessels can be lifesaving. For optimal care, ships should stock both oral ACTs and injectable artesunate for the initial treatment of malaria.

While ACTs target the malaria parasites themselves, other medications can help manage the symptoms of the disease. Paracetamol can be used to relieve fever and pain. However, medications such as ibuprofen or aspirin should be avoided due to the potential for increased bleeding risk with malaria. Metoclopramide can help with nausea and vomiting. Oral rehydration solutions and clear fluids are essential to prevent dehydration, a common complication of malaria, especially when vomiting and diarrhoea are present. Loperamide (imodium) or smecta can be used for diarrhoea, but only if there is no blood or mucus in the stool.

## WHEN TO SEEK MEDICAL ATTENTION

All cases of malaria require follow-up by a doctor to monitor for potential complications. If flu-like symptoms persist despite a negative initial RDT test, it's important to repeat the test, especially if the person has been in an area where malaria is prevalent. In cases of doubt and worsening symptoms, starting malaria treatment despite negative tests is often the safest course of action. The risk of delaying treatment due to a false negative test can be fatal, while the side effects of ACTs are relatively minor.

Overall, combatting malaria at sea requires a comprehensive and collaborative approach that addresses the unique challenges faced by seafarers. By implementing proactive measures, enhancing medical support systems, and raising awareness, we can effectively reduce the burden of malaria on maritime communities and ensure the health and wellbeing of those working at sea.

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