MEMBER ALERT

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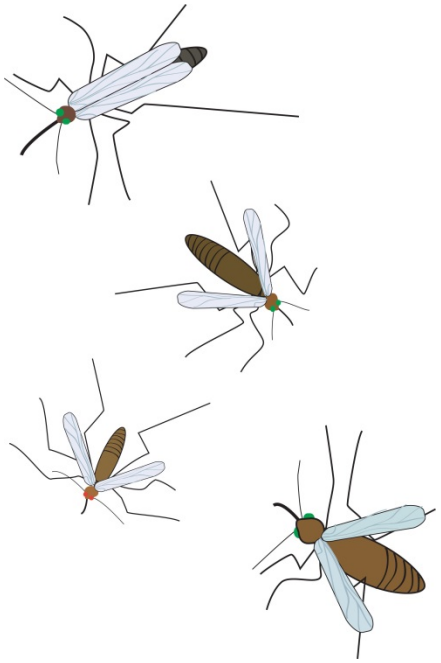
FEBRUARY 2, 2015

CONCERNS AND PRECAUTIONS REGARDING MALARIA



The American Club recently experienced two cases of crewmen contracting malaria subsequent to a port call in the Congo. Sadly, one of these cases proved fatal. The other case, although not fatal, nonetheless resulted in the severe illness of the seafarer concerned.

Malaria is endemic to large areas of Africa, Asia, Latin America, the Middle East, and the South Pacific. According to the World Health Organization (WHO), there were about 207 million malaria cases in 2012 (with an uncertainty range of 135 million to 287 million) and an estimated 627,000 malaria deaths (with an uncertainty range of 473,000 to 789,000). Ninety per cent of these deaths occur in sub-Saharan Africa, mostly among children younger than five.

Malaria is caused by a parasite transferred by the bite of the *Anopheles* mosquito which carries the protozoan species *Plasmodium falciparum* – the deadliest of the diseases.

The symptoms of malaria may appear as early as seven days after the infective mosquito bite, but they are usually visible between 10 and 15 days thereafter. The first symptoms – fever, headache, chills and vomiting – may be mild and difficult to recognize as malaria.

Plasmodium falciparum also destroys red blood cells. This can cause acute anemia. It can also affect the lungs, kidneys and brain. A major complication is cerebral malaria. This can lead to coma, as well as transient, or permanent, neurological effects. It can also cause death.

Prevention: mosquito avoidance measures

Members' attention is drawn to an article in the American Club's publication ***Currents***, Issue 26 (May 2008) pages 8 to 11, *Being Aware and Taking Precautions to Prevent Malaria,* as attached. It provides guidance on best practices for shipowners when transiting, or at port in, areas affected by malaria.

Staying informed about the disease is also an important form of prevention. Your Managers recommend that shipowners consult the World Health Organization (WHO) (http://www.who.int/malaria//en/) website for further information. In addition, the United States Centers for Disease Control and Prevention (CDC) maintain a database by country (http://www.cdc.gov/malaria/travelers/country_table/a.html) for Members' consideration.

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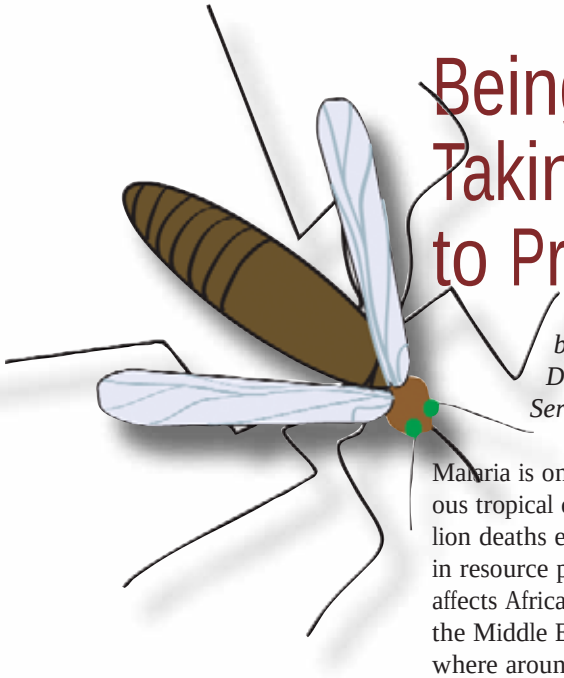
Because of the nocturnal feeding habits of *Anopheles* mosquitoes, malaria transmission occurs primarily between dusk and dawn. Members whose vessels are in or voyaging through endemic areas should encourage their crew to use an effective mosquito repellent applied to exposed parts of the skin. A permethrin-containing product may also be applied to bed nets and clothing for additional protection.

Anti-malarial medicines can also be used to prevent the disease. This requires taking such medicine before, during and after travel to an area with malaria. Taking the drug before travel allows the antimalarial agent to be in the blood before exposure to malarial parasites. Members should consult qualified physicians to consider which anti-malarial medications are best used prior to their vessels entering an affected location, as well as ensure that medications are available in good time prior to arrival in such locations.

Members should generally remain diligent in ensuring that anti-malarial medications are available on board and encourage the master to check that all crew members are taking them.

Your Managers would like to thank Halcyon Marine Healthcare Systems in Manila, and Future Care, Inc. in New York, for their assistance in providing information for this Alert.



Being Aware and Taking Precautions to Prevent Malaria

by Rob Verbist, M.D.
Director Mediport Maritime Medical Service Antwerp, Belgium

Malaria is one of the world's most common and serious tropical diseases. Malaria causes at least 1 million deaths every year, the majority of which occur in resource poor countries. Malaria predominantly affects Africa, south and central America, Asia, and the Middle East. The heaviest burden is in Africa, where around 90% of deaths from malaria worldwide occur each year.

Nevertheless more than 1/3 of clinical malaria cases occur in Asia and 3% occur in the Americas.

Non-immune travellers such as seafarers are at a substantial risk of acquiring dangerous "falciparum" malaria. Each year as many as 30,000 travellers fall ill with the disease.

Malaria is also a maritime problem

Seafarers must be made aware of the risks of malaria while employed. Those that contract the disease are not educated and aware of the risks. Generally the problems are:

- too many seafarers are unaware that malaria is serious and potentially fatal;
- the real risk for seafarers is often miscalculated;
- seafarers are not familiar with the signs and symptoms of malaria; and
- seafarers do not protect against malaria sufficiently and do not take appropriate protective medication.

Malaria - the disease

Malaria is transmitted by mosquitoes. The malaria parasites travel through the bloodstream to the liver to grow and develop. They leave the liver and enter the bloodstream again to invade the red blood cells, finish growing, and begin to multiply quickly. The number of parasites increases until the red blood cells burst, releasing thousands of parasites into the blood. The parasites then attack other red blood cells, and the cycle of infection continues, causing the common signs and symptoms of malaria.

Malaria - symptoms

The symptoms of the most life-threatening type of malaria are usually experienced between one week and two months after infection. Symptoms are flu-like and include fever (often exceeding 40°C), chills, malaise, nausea and vomiting, fatigue, myalgia (muscle pain), headaches, and sweating. A typical attack lasts 8-12 hours.

Three successive stages may be observed: (1) cold stage; (2) hot stage; and (3) sweat stage. These stages are often NOT observed in the life-threatening "falciparum" malaria. A patient with severe falciparum malaria may present with confusion, drowsiness, extreme weakness and may develop cerebral malaria with convulsions, an unrousable coma and rapid death.

Be aware of the risk

Review all the ports to be visited, and check the malaria risk. Compare the overall risk in a country with the risk at the coast and where possible in the individual port. The risk is influenced by:

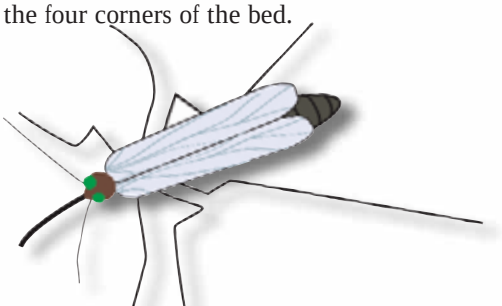
- seafarers staying onboard, at anchor, or taking shore leave;
- seafarers signing off , travelling inland, or joining the ship in that port; and
- the duration of stay, daytime or also at dusk or dawn (with higher risk).

What should seafarers do to avoid being bitten?

Within 2 miles of a malaria shore it is important that:

- doors and windows are kept closed after dusk;
- any mosquitoes entering compartments are killed;
- insect spray is used, also under tables and chairs and in dark corners;
- long sleeved shirts and trousers are worn;
- pools of stagnant water, dew or rain are removed;
- refuse bags and bins are sealed properly;
- portholes, ventilation and other openings are covered with fine wire mesh; and
- lights are screened to avoid attracting mosquitoes.

The mosquitoes are most active in low light hours after dusk and prior to dawn. Air conditioning helps to keep the mosquitoes away, it is important that it is left on all day. While sleeping, use undamaged impregnated mosquito nets, put under the mattress, fixed on the four corners of the bed.



Be disciplined about taking anti-malarial drugs

When a ship is bound for a malaria port, in addition to taking all possible measures to prevent mosquito bites, medication has to be given to the whole crew systematically. Preventative medication, combined with other measures against mosquitoes, strongly reduces the chance of disease, if taken correctly.

Most medication is taken for a set period before entering a malaria zone, continued while you are in a malaria zone and for a set period after leaving. Resistance of the parasite against some kinds of malaria medication exists and is high in several regions. The World Health Organisation (WHO) advises on the type of prevention to be used in a particular region (www.who.int).

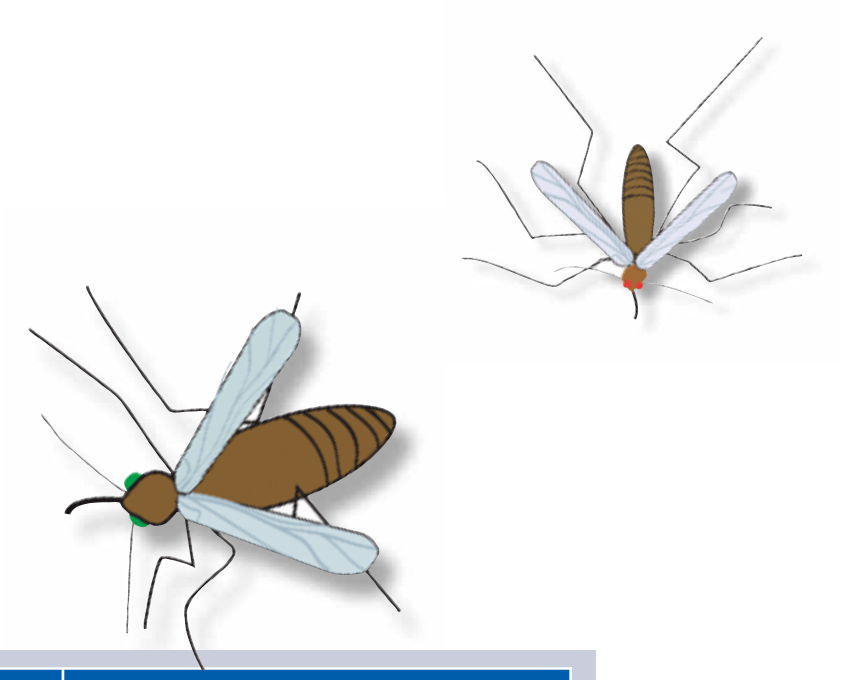


TABLE 1

MALARIA RISK		TYPE OF PREVENTION
Type I	Very limited risk of malaria transmission	Mosquito bite prevention only
Type II	Risk of P.vivax malaria or fully chloroquine-sensitive P. falciparum only	Mosquito bite prevention plus chloroquine chemoprophylaxis
Type III	Risk of Malaria transmission and emerging chloroquine resistance	Mosquito bite prevention plus chloroquine+proguanil chemoprophylaxis
Type IV	High risk of falciparum malaria plus drug resistance, or moderate/low risk falciparum malaria but high drug resistance	Mosquito bite prevention plus either atovaquone/proguanil, doxycycline or mefloquine, (take one that no resistance is reported for in the specific areas to be visited)

For more details see SHIP "Guidelines for Malaria Prevention Onboard Merchant Ships"

TABLE 2

Preventative treatment recommended per country, specific for seafarers.

( ) Type of Prevention between brackets = in many areas seafarers may drop their chemoprophylaxis after a detailed discussion of their itinerary with a specialist doctor and careful evaluation of the malaria risk in relation to shipping, on condition that strict anti-mosquito measures are taken from sunset to sunrise and that malaria emergency treatment and full instructions are on hand.

Countries in **BOLD** have ports	Type of Prevention	*
EAST EUROPE		
ARMENA	I	*
AZERBAIJAN	none (I)	*
GEORGIA	I	*
KYRGYZSTAN	I	*
TAJIKISTAN	III	*
TURKMENISTAN	none (I)	*
UZBEKISTAN	I	*

Countries in **BOLD** have ports	Type of Prevention	*
MIDDLE EAST		
IRAN	none(II)(IV)	*
AZERBAIJAN	none (II)	*
OMAN	none	
SAUDI ARABIA	none (IV)	*
SYRIAN ARAB REPUBLIC	none (I)	*
TURKEY	none (II)	*
YEMEN	IV	*

**more details see SHIP Guidelines for Malaria Prevention Onboard Merchant Ships*

Countries in **BOLD** have ports	Type of Prevention	*
NORTH AFRICA		
ALGERIA	none (I)	*
EGYPT	none	
MOROCCO	none (I)	*
CENTRAL AFRICA		
ANGOLA	IV	
CAMEROON	IV	
CENTRAL AFRICAN REPUBLIC	IV	
CHAD	IV	
CONGO	IV	
DEMOCRATIC REPUBLIC OF THE CONGO	IV	
EQUATORIAL GUINA	IV	
GABON	IV	
SUDAN	IV	
ZAMBIA	IV	
EAST AFRICA		
BURUNDI	IV	
COMOROS	IV	
DJIBOUTI	IV	
ERITREA	IV	*
ETHIOPIA	IV	
KENYA	IV	
MADAGASCAR	IV	
MALAWI	IV	
MAURITIUS	none	
MAYOTTE, (FRENCH TERRITORIAL COLLECTIVITY)	IV	
MOZAMBIQUE	IV	
RWANDA	IV	
SOMALIA	IV	
TANZANIA	IV	
UGUNDA	IV	
SOUTH AFRICA		
BOTSWANA	IV	
NAMIBIA	(IV)	
SOUTH AFRICA	(IV)	
AWAZILAND	IV	
ZIMBABWE	IV	
WEST AFRICA		
BENIN	IV	
BURKINA FASO	IV	
CAPE VERDE	none (I)	*
GAMBIA	IV	
GHANA	IV	
GUINEA	IV	
GUINEA-BISSAU	IV	

Countries in **BOLD** have ports	Type of Prevention	*
WEST AFRICA *(continued)*		
IVORY-COAST	IV	
LIBERIA	IV	
MALI	none (I)	
MAURITANIA	III	
NIGER	IV	
NIGERIA	IV	
SAO TOME AND PRINCIPE	IV	
SENEGAL	IV	
SIERRA LEONE	IV	
TOGO	IV	
EAST ASIA		
CHINA	none(II)(IV)	*
KOREA, DEMOCRATIC PEOPLES REPUBLIC OF	none(I)	*
KOREA, REPUBLIC OF	none(I)	*
SOUTH EAST ASIA		
CAMBODIA	(IV)	*
EAST TIMOR	(IV)	
INDONESIA	(IV)	*
LAOS	IV	
MALAYSIA	none(IV)	*
MYANMAR,(FORMERLY BURMA)	(IV)	*
PHILIPPINES	none(IV)	*
THAILAND	none(IV)	*
VIETNAM	IV	*
INDIAN SUBCONTINENT		
AFGHANISTAN	IV	
BANGLADESH	(IV)	*
BHUTAN	IV	*
INDIA	(IV)	
NEPAL	III	
PAKISTAN	IV	
SRI LANKA	III	*
AULSTRALIA AND THE PACIFIC		
PAPUA NEW GUINEA	IV	
SOLOMON ISLANDS	IV	
VANUATA	III	*
MEXICO AND CENTRAL AMERICA		
BELIZE	none (II)	*
COSTA RICA	none (II)	*
EL SALVADOR	none (II)	*
GUATEMALA	none (II)	*
HONDURAS	none (II)	
MEXICO	none (II)	*
NICARAGUA	none (II)	*
PANAMA	none (II) (IV)	*

Countries in **BOLD** have ports	Type of Prevention	*
SOUTH AMERICA		
ARGENTINA	none	*
BOLIVIA	II	*
BRAZIL	(IV)	*
COLOMBIA	(II) (III)	*
EQUADOR	(IV)	*
FRENCH GUYANA	(IV)	*
GUYANA	(IV)	*
PARAGUARY	II	*
PERU	(II) (IV)	*
SURINAME	(IV)	*
VENEZUELA	(II) (IV)	*
CARRIBEAN		
DOMINICAN REPUBLIC	(II)	*
HAITI	(II)	

∗more details see SHIP Guidelines for Malaria Prevention Onboard Merchant Ships

Early diagnosis and treatment for a febrile illness

Fever occurring in a seafarer 1 week or more after entering a malaria risk area, and up to 3 months after departure, is a medical emergency that should be investigated urgently. If the diagnosis of malaria is suspected onboard, call for radio medical advice immediately.

In case of probable malaria treat the patient first and then arrange for definitive diagnosis. A definitive diagnosis can be made by microscopy of stained blood films.

Standby emergency treatment

Standby emergency treatment has an important place in the prevention of death by malaria in seafarers. Standby emergency treatment is indicated for seafarers, who make frequent short stops in endemic areas over a prolonged period of time.

Standby emergency treatment is started when fever and flu-like symptoms occur after being in an area with a malaria risk and where it is not possible to obtain medical attention within 24 hours.

Call for radio medical advice when standby emergency treatment is considered. A full course of effective treatment should always be given once a decision to give anti-malarial treatment has been reached.

Several kinds of malaria medication can be used for standby emergency treatment, often in combination. Guidance can be found at the World Health Organisation webwsite, www.who.int, and in the "Guidelines for Malaria Prevention Onboard Merchant Ships". Copies of the guidelines can be downloaded at the following website: http://www.seafarershealth.org/documents/A4-GUIDELINES-MALARIALow.pdf.

A person who is developing an attack of "probable malaria" onboard, is best assisted and controlled by a colleague constantly. All seafarers who were treated on board for "probable malaria" have to consult a doctor upon arrival (if possible with blood slides).