Maritime Health Trainings for Seafarers and Doctors

Tropical and infectious diseases

ERASMUS+ KA2 - Cooperation for Innovation and the Exchange of Good Practices
KA202 - Strategic Partnerships for vocational education and training

INFECTIOUS DISEASES

Infectious and contagious (communicable) diseases are caused by bacteria, viruses, parasites and fungi. An infected patient may or may not have symptoms.

SYMPTOMS

Typical symptoms are fever, fatigue, headache, nausea and intestinal problems. Widespread skin reactions are also typical. The symptoms may develop rapidly, even within hours, or may take days to develop.

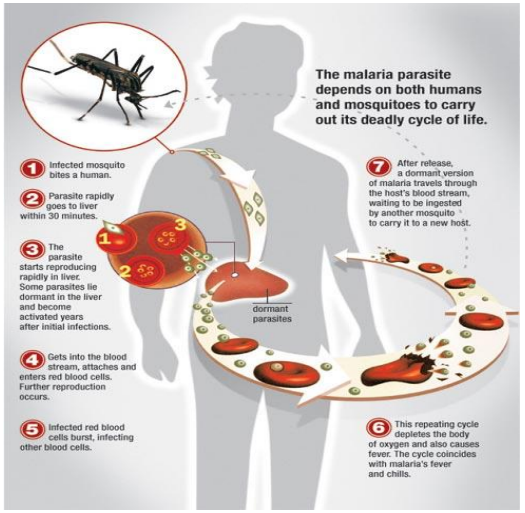
MALARIA

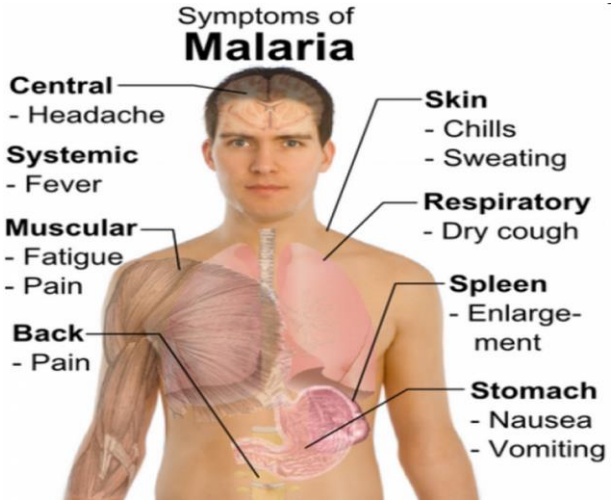
Malaria is a mosquito-borne infectious disease that affects humans.

* Malaria is a serious and potentially fatal disease

*The incubation period in most cases varies from 7 to 30 days.

Antimalarial drugs taken for prophylaxis by travelers can delay the appearance of malaria symptoms by weeks or months, long after the traveler has left the malaria-endemic area.



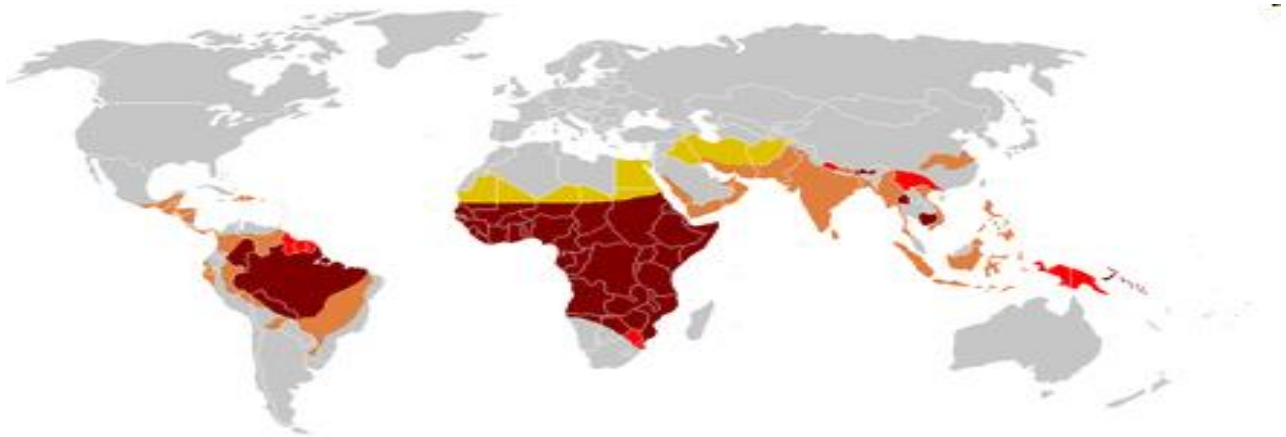


Malaria Risk Areas for Seafarers

*The ship management needs to review all the ports to be visited, and check the malaria risk.

*All port areas (ports and hinterland) of Africa, Asia, Central and South America situated between 25° NB and 25° SB are potentially contaminated.

- Low risk
- Moderate risk
- High
- Very high risk



Advices for seafarers

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 chloro-quine 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/pro-guanil, doxycycline or mefloquine, (take one that no resistance is reported for in the specific areas to be visited

The numbers I, II, III and IV refer to the **type of prevention** :

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.

VIRAL Hepatitis Infection

MariHEALTH

What is Viral Hepatitis?

- Viral hepatitis is a systemic disease with primary inflammation of the liver by any one of a heterogeneous group of hepatotropic viruses.
- The most common causes of viral hepatitis are the five unrelated hepatotropic viruses Hepatitis A, Hepatitis B, Hepatitis C, Hepatitis D, and Hepatitis E.
- In addition to the nominal hepatitis viruses, other viruses that can also cause liver inflammation include Herpes simplex, Cytomegalovirus, Epstein-Barr virus, or Yellow fever.

❖ Clinical Terms

- Hepatitis: inflammation of liver;
- Acute Viral Hepatitis: symptoms last less than 6 months
- Acute Hepatic Failure:is the appearance of severe complications rapidly after the first signs of liver disease (such as jaundice), and indicates that the liver has sustained severe damage (loss of function of 80-90% of liver cells).Massive hepatic necrosis with impaired consciousness within 8 weeks of onset of illness.
- Chronic Hepatitis: Inflammation of liver for at least 6 months
- Cirrhosis: Replacement of liver tissue→ fibrosis(scar tissue).These changes lead to loss of liver function.
- Fulminant Hepatitis: severe impairment of hepatic functions or severe necrosis of hepatocytes in the absence of preexisting liver disease.

Hepatitis A

❖Hepatitis A

- ✓ Hepatitis A (formerly known as “infectious” hepatitis or epidemic jaundice) is an acute infectious disease caused by Hepatitis A virus (HAV).
- ✓ The disease is heralded by non-specific symptoms such as fever, chills, headache, fatigue, generalized weakness and aches and pains, followed by anorexia, nausea, vomiting, dark urine and jaundice.
- ✓ The disease is benign with complete recovery in several weeks.

❖Incubation period

10-50 days (usually 25 to 30 days).

❖Mode of Transmission

a) *FAECAL-ORAL ROUTE:* Major route of transmission.
-By contaminated water, food or milk.

b) *PARENTERAL ROUTE (Rarely):*
-By blood and blood products or by skin penetration through contaminated needles.

c) *SEXUAL TRANSMISSION:*
-May occur mainly among homosexual men because of oral-anal contact.

Hepatitis B

❖Hepatitis B

- ✓Hepatitis B (formerly known as “serum” hepatitis) is an acute systemic infection with major pathology in the liver, caused by hepatitis B virus.
- ✓Transmitted by the Parenteral route.
- ✓The acute illness causes liver inflammation, vomiting, jaundice, and, rarely, death. Chronic hepatitis B may eventually cause cirrhosis and liver cancer.
- ✓Hepatitis B is endemic throughout the world, especially in tropical & developing countries.

❖Incubation Period

45-180 days (usually 60-90 days)

b) RESERVOIR OF INFECTION:
-Men is the only reservoir of infection which can be spread either from carriers or from cases.

c) Infective material:
-Contaminated blood is the main source,
-Virus has been found in body secretion such as saliva, vaginal secretion & Semen in infected material.

d) Resistance:
-Readily destroyed by sodium hypochlorite, as is by heat sterilization in an autoclave for 30-60 min.

Hepatitis C

Hepatitis C

- ✓ **Hepatitis C** is an infectious disease affecting primarily the liver, caused by the hepatitis C virus (HCV).

Incubation Period

40-120 days

Treatment

Interferon - may be considered for patients with chronic active hepatitis. The response rate is around 50% but 50% of responders will relapse upon withdrawal of treatment.

Ribavirin - there is less experience with ribavirin than interferon. However, recent studies suggest that a combination of interferon and ribavirin is more effective than interferon alone.

ACUTE DIARRHEA IN ADULT

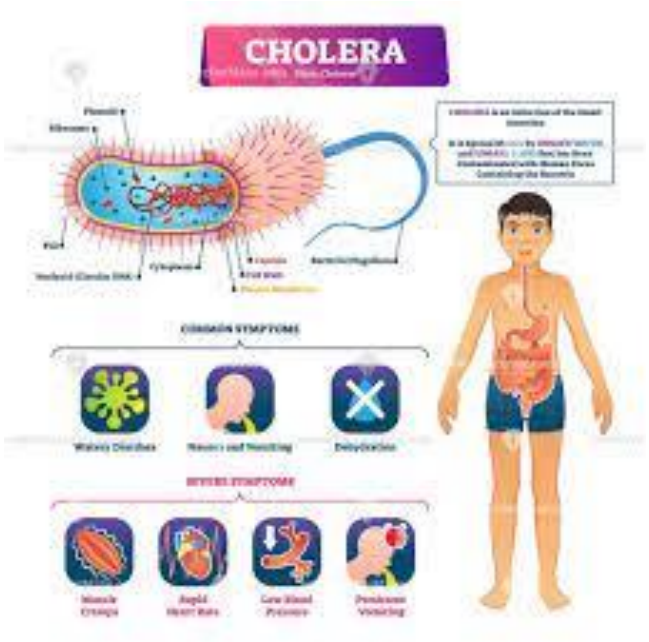
- DURATION < 14 DAYS
- VIRAL GASTROENTERITIS: MOST COMMON
  - ADULT—NOROVIRUS (20M) CHILDREN—ROTAVIRUS
- BACTERIAL GASTROENTERITIS: RELATED TO TRAVEL, CO-MORBIDITIES, FOODBORNE.
- MOST ARE SELF LIMITED, DO NOT REQUIRE STOOL STUDIES.
- TREATMENT IS FOCUSED ON PREVENTION AND DEHYDRATION.

ANTIBIOTICS?

- NOT NECESSARY FOR MOST NON-SEVERE DIARRHEA.
- MOST OFTEN LIMITED AND CAUSED BY VIRUSES.
- AFFECT NORMAL FLORA.
- PROLONG ILLNESS DUE TO C. DIFF SUPERINFECTION.
- INCREASED RISK OF HUS (17X)
- PROMOTE RELEASE OF BACTERIAL TOXINS

CHOLERA

*Cholera is an intestinal illness caused by a bacterium called Vibria cholerae.
* The symptoms are diarrhoea, vomiting and leg cramps. It spreads mainly via drinking water that is contaminated with the bacteria.
* Diarrhoea and vomiting begin 2–5 days after the infection. The faeces are often watery, described as ‘rice boiling water’.
* Fluid replacement is extremely important and must be started after the first symptoms show up.

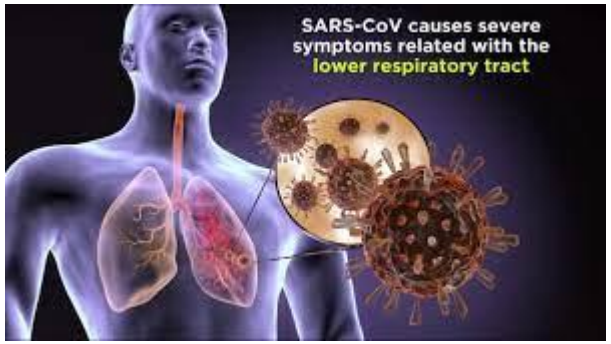


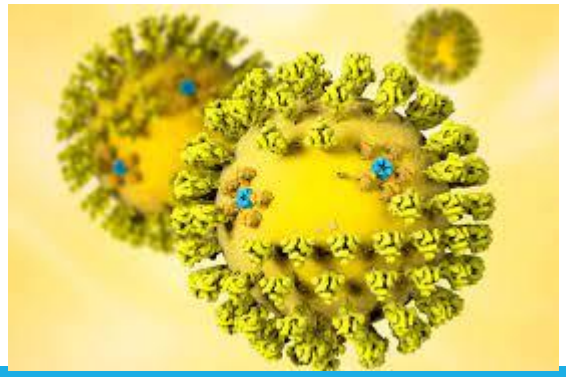
SARS (SEVERE ACUTE RESPIRATORY SYNDROME)

- SARS is caused by a virus related to one that causes the common cold.
- All of the cases occurred in people who had been in southern People's Republic of China or had contact with someone from southern China.
- SARS began with fever (more than 38°C), followed after a few days by cough and breathlessness.
- The illness became rapidly more severe in nearly all cases and death occurred in 10% of cases.

PRECAUTIONS IN CASES OF POSSIBLE SARS

- Keep patient stay in a single cabin and not leave it for any reason.
- Seek radio medical advice at once. If the advice is to make for the next or nearest port notify medical authorities in that port immediately.





Influenza - HUMAN INFLUENZA

- Influenza, or “flu”, is an acute infectious disease caused by the infl uenza virus, which is spread by respiratory droplets from a person with infl uenza.
- Most people with influenza get better in two to five days.
- Outbreaks occur in winter in temperate zones but can occur at any time of the year in the tropics.

Signs and symptoms

■ fever, ■ cough, ■ feeling unwell, ■ headache, ■ weakness and fatigue

Treatment

- Take a rest
- Regularly drink water,
- If neccessary, take antiviral drugs
- To minimize symptoms, if neccessary, use parasetamol (amidopyrine).