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**Vaccination and other kinds of
Prevention for Seafarers**

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Introduction

As a seafarer you belong to a special group of business travellers who may travel to almost any part of the world. The risk of infectious diseases varies significantly in different parts of the world. To a great extent, the risk you are exposed to depends on how often you are ashore, and, as such, on which kind of service you operate in, and on which type of ship you are signed on. Therefore, specific rules on vaccinations and other prophylaxis that apply to everyone do not exist. However, it is possible to provide you with some guidelines, and in addition, you may discuss your need for vaccination with your General Practitioner, the maritime doctor or the vaccinator.

In view of the risk of blood borne infections and of the lack of possibility to procure information on the content of foreign vaccinations, it is strongly recommended that you are vaccinated before you leave. Then, only as an exception, you may have to receive injections abroad. Remember to bring hypodermic syringes and needles from the ship's medicine chest, in case you have to receive injections abroad. Long before signing on you should remember to see the maritime doctor, as several of the vaccinations have to be given with weeks between them.

If you catch an infectious disease in spite of vaccinations and other preventive measures you must make sure that it is reported to the Danish Maritime Authority and to the insurance company. In some cases you might be granted compensation. The Danish Maritime Authority recommends ship owners to pay for vaccinations, which are provided in accordance with this brochure.

In the first part of this brochure you can find information on the individual diseases and vaccinations. In the end, there is a summary of vaccinations and recommendations. The summary may be used to determine your need for vaccination in consultation with the vaccinator.

For further information on the individual diseases, please go to Statens Serum Institut at www.ssi.dk or Centers for Disease Control and Prevention www.cdc.gov/travel



SØFARTSSTYRELSEN

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Avian influenza

Avian influenza is a viral disease, which primarily infects birds, but rarely human beings.

Incidence

Worldwide. All birds may be infected.

Mode of transmission

Avian influenza is presumably transmitted primarily via direct contact with live birds that are infected. Dust/feathers that contain dried and pulverized faeces also constitute an infection source.

Symptoms

Inflammation of the eyes is common, but also common symptoms of influenza (fever, headaches, muscle pains and common indisposition.) Symptoms like diarrhoea, vomiting, stomach ache and chest ache as well as bleeding from the gums are known. Time from exposure to symptoms is 2 to 8 days

Prevention

Avoid contact with live birds that are infected– i.e. in local markets if an outbreak is known in the region. Eating meat or eggs from any bird constitutes no risk, provided they are well done.

Vaccination

A vaccine is being developed, however it applies only to groups at risk (i.e. veterinaries in regions with outbreaks)

Cholera

Cholera is a water and food borne bacterial infection, which may progress very differently.

Incidence

Especially in the poor countries in Asia, Africa and South America. Outbreaks are often seen in connection with natural disasters.

Mode of transmission

Is spread through water and food, often drinking water contaminated by faeces from human beings.

Symptoms

Profuse watery stools and vomiting, which may be life-threatening due to the rapid loss of fluids. Without treatment, the death rate is high. An early sign of loss of fluids may be cramps in calf muscles.

Prevention

Boiling and cleaning drinking water. Food should be thoroughly done or boiled. Shellfish constitute a particular risk.

Vaccination

Efficient vaccine is available – moreover, it protects you partly against common “tourist diarrhoea”. The vaccination is drinkable.

2 vaccinations with 1 week’s interval. Duration: 2 years.

Certain countries still require cholera vaccinations in spite of the cancellation of international requirements. It is recommended that seafarers who could be forced into vaccination abroad are vaccinated at home. Vaccination is recommended when visiting areas with an ongoing or expected cholera epidemic (i.e. in connection with natural disasters).

Dengue fever

Dengue fever is a viral infection transmitted by mosquitoes.

Incidence

Dengue fever is common in the tropics, Africa, Asia, South and Central America. Increased incidence in large cities and in slum areas.

Mode of transmission

Only by mosquitoes (biting during the daytime). There are four different type of viruses, and the infection of one type does not immunise you against the others.

Symptoms

Like serious influenza or malaria: High fever, headache, muscle pain and possibly rash. In case of infection, there is a risk of serious illness with haemorrhagic complications that will require hospital treatment.

Tid fra smitte til symptomerne viser sig: 2 – 5 dage.

Prevention

Avoid mosquito bites – i.e. active prevention by air condition, mosquito net, mosquito balm and proper clothes (covered wrists, ankles and top of the head, and avoid dark clothes)

Vaccination

No vaccine is available.

Diphtheria

Diphtheria is a bronchial infection caused by bacteria.

Incidence

The disease is rare in Denmark. Pandemics may occur, as in the 1990s in the former Soviet Union and in Laos and the northern Thailand

Mode of transmission

People are infected person-to-person by coughing and sneezing, possibly even from a healthy disease carrier

Symptoms

Inflammation of the throat with difficulty in swallowing and light fever. Possibly swollen glands of neck region and hoarseness. Possibly coated tonsils. Time from exposure to symptoms is 2 to 5 days.

Prevention

Valid vaccination. Infected persons should make sure to cough/sneeze into a disposable handkerchief.

Vaccination

The vaccination is included in the Danish Vaccination Programme. After this, it is recommended to be vaccinated every 10 years.

HIV

The HIV infection is caused by a viral infection. HIV infection causes AIDS.

Incidence

The number of people infected by HIV varies in different areas of the world. The highest number of people infected is in some parts of Africa and the lowest number of people infected is in Northern Europe, i.e. in Denmark. Certain groups of people are especially exposed to being infected. These are prostitutes, men having sex with men, and drug addicts, sharing needles and syringes.

Mode of transmission

The virus is transmitted by sexual contact and by contact with blood. Thus, you can be infected by blood transfusion, needle sticks, tattoos and when treated with insufficiently cleaned instruments.

Symptoms

Most people who are infected with HIV do not get any symptoms immediately. A few patients may catch fever and feel unwell two weeks after catching the infection. The symptoms persist from a few days and up to a week. The infection is, however, chronic. After a period of 10 years approx. (from two to more than 20 years) the immune system will be so weakened by the chronic HIV infection that the person is susceptible to many other infections and will develop AIDS..

Prevention

Practise safe sex. Avoid contact with other people's blood and tissue fluids. Avoid treatment with insanitary instruments as far as possible. If possible, bring your own hypodermic syringes and needles when being treated ashore.

Vaccination

No vaccine is available.

Hepatitis A

Hepatitis A is a viral disease, where virus from the liver is excreted through the stool.

Incidence

The disease is found worldwide except in Northern Europe and North America

Mode of transmission

The virus is excreted through the stool. Virus may contaminate drinking water and food if hygienic conditions are bad and the sewerage is poor.

Symptoms

Fever, nausea, stomach ache, jaundice (yellow skin and whites of eyes, darker yellow urine and pale faeces).

Time from exposure to symptoms is approximately 3 weeks.

Prevention

Proper hand hygiene and clean drinking water.

Vaccination

Efficient vaccine is available. The vaccine is given in 2 doses over a period of 6 months to 3 years. After the second vaccination you are protected for at least 20 years.

Hepatitis B

Hepatitis B is a viral disease that may progress very differently, ranging from no symptoms to severe disease.

Incidence

The disease is found worldwide, but especially in Asia, Africa and South America.

Mode of transmission

The virus is transmitted by sexual contact and by contact with blood. You may be infected by blood transfusion, needle sticks, tattoos and when treated with insufficiently cleaned instruments.

Symptoms

Fever, nausea, stomach ache, jaundice (yellow skin and whites of eyes, darker yellow urine and pale faeces).

Time from exposure to symptoms is 1 to 3 months.

Prevention

Practise safe sex. Avoid other people's blood and tissue fluids. Avoid treatment with insanitary instruments as far as possible. If possible, bring your own hypodermic syringes and needles when being treated ashore.

Vaccination

Efficient vaccine is available. The vaccine is given in 3 doses over 6 months. After the third vaccination you are protected for at least 10 years.

Hepatitis C

Hepatitis C is a viral disease that often progresses with no or few/weak symptoms.

Incidence

The disease is found worldwide.

Mode of transmission

The virus is primarily transmitted by contact with blood and to a less extent by sexual contact. You may be infected by blood transfusion, injections, tattoos and when treated with insanitary instruments.

Symptoms

Fever, nausea, stomach ache, jaundice (yellow skin and whites of eyes, darker yellow urine).

Time from exposure to symptoms is a few weeks to several months. The disease may also progress without symptoms; however, later you may develop a chronic inflammation of the liver.

Prevention

Avoid other people's blood and tissue fluids. Avoid treatment with insanitary instruments as far as possible. If possible, bring your own hypodermic syringes and needles when being treated ashore.

Vaccination

No vaccine is available.

Japanese encephalitis

Japanese encephalitis is a viral disease, which is transmitted by mosquitoes.

Incidence

It exists only in Asia, primarily in agricultural districts or in the slum areas of the cities.

Mode of transmission

The virus is transmitted by various types of mosquitoes that are active both during the daytime and in the dusk. Infection is not transmitted from person to person.

Symptoms

Headache, fever and weakened consciousness.

Prevention

Avoid mosquito bites - i.e. active prevention by air condition, mosquito net, mosquito balm and proper clothes (covered wrists, ankles and top of the head and avoid dark clothes)

Local epidemics may occur. The risk is highest during the rainy season. The risk is increased when sailing along rivers, reduced at short stays.

Vaccination

3 doses during one month (+ revaccination after 2 years). A reduced vaccination programme is available.

Malaria

Malaria is caused by a parasite, which is transmitted by mosquitoes. There are 4 sub-types. The most dangerous sub-type (Falciparum) is found mainly in tropical Africa, which is considered a high risk area. Denmark has a special malaria strategy meant for seafarers. For more information, please go to: www.dma.dk, The Centre of Maritime Health Service

Incidence

Malaria is found in Africa, Asia, the Middle East, Central and South America. The incidence varies from year to year. The risk profile in the local districts may vary from the rest of the country. Increased risk during the rainy season. 4 different types, earlier illness does not make you immune.

Mode of transmission

Malaria is transmitted by mosquitoes. The mosquitoes mainly bite after dark. Transmission via blood transfusion is known.

Symptoms

Like regular influenza: Fever (maybe shivers), feeling unwell, headache, muscle pain, fatigue, vomiting. May be mistaken for dengue fever. Time from exposure to symptoms is 8 to 10 days. On rare occasions, the symptoms do not occur until 3 months after the infection in case of falciparum malaria, and more than 1 year after for the 3 other types.

Prevention

Avoid mosquito bites - i.e. active prevention by air condition, mosquito net, mosquito balm and proper clothes (covered wrists, ankles and top of the head and avoid dark clothes)

In high risk districts preventive medicine should be taken from 1 day before arrival and to 7 days after the termination of the stay (Malarone). Preventive medicine is mandatory onboard at port calls in high-risk districts (high risk districts are defined in the malaria guide of the Danish Maritime Authority).

Vaccination

No vaccine is available.

Polio (poliomyelitis)

Polio is a viral infection, which in most cases progresses with almost no symptoms. However, in a few cases, polio may result in permanent paralysis and possible death.

Incidence

The disease is eradicated in the USA, Europe, and the region of the Pacific Ocean. It is still found in India and Pakistan and in certain regions in Africa.

Mode of transmission

Transmission occurs through water contaminated with faeces, however people may infect each other by coughing and sneezing.

Symptoms

Usually, the disease progresses with almost no symptoms, only as a mild infection. However, serious courses with symptoms as meningitis and paralysis do occur. If respiratory muscles are affected, the disease may be mortal.

Prevention

Valid vaccination. Avoid contaminated drinking water. If you are not vaccinated try to avoid contact with infected persons, and do not visit regions where polio still exists.

Tetanus

Tetanus infection is caused by bacteria, which is commonly found in soil and street dirt. The bacterium produces a toxin, which is not killed when cooked or dried out.

Incidence

Tetanus may develop in all areas where the population is not vaccinated. In the western part of the world the disease is rare as it is included the Vaccination Programme for Children.

Mode of transmission

Wounds contaminated with soil, dirt, faeces or saliva, deep wounds, wounds from bites and wounds with dead organic tissue. Is not transmitted from person to person.

Symptoms

Facial muscle spasms and difficulty in swallowing as well as rigidity or pain in the muscles around the neck, shoulders or back. The spasms spread quickly to the stomach and upper arms and thighs. Time from exposure to symptoms is most frequently 3 to 14 days.

Prevention

Valid vaccination. Large wounds should be thoroughly cleaned. If it is uncertain whether the person is vaccinated or not, both Human Tetanus Immunoglobulin and vaccination are given in case of emergency.

Vaccination

The vaccination is part of the Danish Vaccination Programme for Children. After this, vaccination is recommended every 10 years. The person should be vaccinated, if it is uncertain when the Tetanus vaccine was last given. If the person has never been vaccinated, the vaccination programme is started all over again. If the person is injured, the Human Tetanus Immunoglobulin is also given.

Tuberculosis

Tuberculosis is an airborne bacterial infection.

Incidence

It is found worldwide, however, almost all incidents occur in Asia, Africa, and Central and South America.

Mode of transmission

Airborne, i.e. is transmitted by coughing and sneezing.

The risk of infection is higher when staying in closed rooms for a long time together with people who are infected (i.e. prisons and hospitals in the 3rd world.

Symptoms

Prolonged periods of fever, night sweats, fatigue, loss of weight and coughing.

Prevention

Infected persons should use a disposable handkerchief when coughing/sneezing. Not particularly infectious for healthy people. People with a weakened immune response, including persons who are HIV positive, are especially exposed.

Vaccination

Is only recommended for persons in contact with known high-risk environment for a prolonged period of time.

The vaccine is effective after 6 weeks and lasts up to 10 years.

Typhoid fever

Typhoid fever is a bacterial infection, which only infects people. The infection belongs to the Salmonella family.

Incidence

It is found worldwide, especially in developing countries and other areas where the hygienic conditions are poor. The risk of infection is highest on the Indian subcontinent.

Mode of transmission

Contaminated food or drinking water.
Healthy disease carriers are known.

Symptoms

Time from exposure to symptoms is 10 to 20 days.
Typically a week of fever, headache, coughing, no appetite and constipation followed by 2 weeks of rising fever and drowsiness and diarrhoea that turns bloody.

Prevention

Isolation of patients.
Avoid food and drinks that have been insufficiently heated.

Vaccination

Protection after 2-3 weeks, lasts for 3 years.

Yellow fever

Yellow fever is a viral disease, which is transmitted by mosquitoes.

Incidence

It is found in large parts of Africa and South America. The risk area is between 15° Southern latitude and 15° northern latitude approximately.

Mode of transmission

The infection is transmitted by mosquitoes biting during daytime.

Symptoms

Sudden fever, shivers, headache, muscle pain, nausea and vomiting. At a later stage, jaundice (yellow skin and whites of eyes, darker yellow urine).

The disease may also progress without symptoms.

Prevention

Avoid mosquito bites - i.e. active prevention by air condition, mosquito net, mosquito balm and proper clothes (covered wrists, ankles and top of the head and avoid dark clothes)

Vaccination

Effective vaccine is available. 1 vaccination is given; it is effective after 10 days and protects you for 10 years.
The disease is covered by international regulations. This means that seafarers in Africa and South America must hold a valid, international vaccination certificate.

Stays, including airport transit, in countries where Yellow Fever is known to exist, may result in mandatory vaccination demands at a later stage of the journey.

Sexually transmitted diseases

“Sexually transmitted diseases” is a common designation for diseases that may be transmitted during sexual intercourse. The designation covers both traditional venereal diseases (for example gonorrhoea and syphilis), and other diseases such as HIV and inflammation of the liver that may be transmitted by sexual contact and in other ways.

Incidence

Generally, the risk of sexually transmitted diseases is higher in most other countries than in Denmark. Prostitutes are a particular group at risk.

Mode of transmission

As the name indicates the disease is transmitted through sexual contact such as sexual intercourse, anal sex and oral sex.

Symptoms

The different diseases produce different symptoms. The Danish Maritime Authority has issued a pamphlet: “What is worth to know about sexually transmitted diseases”. (It may be ordered from the Danish Maritime Authority).

Prevention

Condoms reduce the risk of infection considerably. Always use condoms of good quality. The quality of condoms bought abroad may be poor. Keep an eye on the expiration date; however, be aware that the durability of condoms is considerably reduced in the tropics.

Vaccination

Hepatitis B is the only sexual transmittable disease that has a vaccine. It is given 3 times over 6 months. After the third vaccination you are protected for at least 10 years.

Summary of vaccinations for seafarers

Diphtheria and tetanus: Vaccinations are part of the Danish Vaccination Programme for Children (since 1950). Revaccination is recommended every 10 years.

Polio: Vaccination is part of the Danish Vaccination Programme for Children (since 1955). After vaccination you are protected for life.

Tuberculosis: In general, vaccination is not recommended

Typhoid fever: In general, vaccination is not recommended

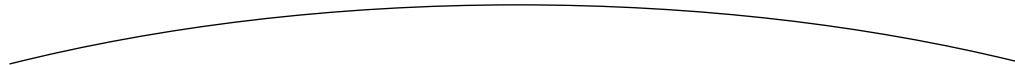
Japanese encephalitis: In general, vaccination is not recommended

Hepatitis A: In general, vaccination is not recommended

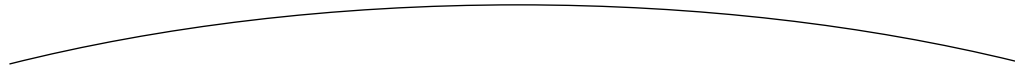
Hepatitis B: The Danish Maritime Authority recommends that persons in charge of medical first aid and treatment of diseases onboard Danish merchant ships are vaccinated against Hepatitis B.

Yellow Fever: The disease is covered by international regulations. This means that seafarers sailing in Africa and South America must hold a valid, international certificate of vaccination.

Cholera: Certain countries still require cholera vaccinations in spite of the cancellation of international requirements. It is recommended that seafarers who may be forced to be vaccinated abroad are vaccinated at home. Vaccination is recommended when visiting areas with a present or expected cholera epidemic (i.e. in connection with natural disasters).



Notes



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