WEST AFRICAN RESCUE ASSOCIATION

YELLOW FEVER: WHAT YOU NEED TO KNOW

THE DISEASE

Yellow fever is a viral hemorrhagic disease, found in tropical regions of Africa and America. It principally affects humans and monkeys, and is transmitted via the bite of infected Aedes aegypti mosquitoes. The "yellow" in the name refers to the jaundice that affects some patients.

STATISTICS WORLDWIDE

There are an estimated 200 000 cases of yellow fever, causing 30 000 deaths, worldwide each year. The number of yellow fever cases has increased over the past two decades due to declining population immunity to infection, deforestation, urbanization, population movements and climate change.

SIGNS AND SYMPTOMS

The first symptoms of the disease usually appear 3–6 days after infection. The infection can occur in one or two phases. **The first or "acute" phase** usually causes fever, muscle pain with prominent backache, headache, shivers, loss of appetite, and nausea or vomiting. Most patients improve and their symptoms disappear after 3 to 4 days. However, 15% of patients enter a **second, more "toxic" phase** within 24 hours of the initial remission. High fever returns and several body systems are affected. The patient rapidly develops jaundice and complains of abdominal pain with vomiting. Bleeding can occur from the mouth, nose, eyes or stomach. Once this happens, blood appears in the vomit and faeces. Kidney function deteriorates. Half of the patients who enter the toxic phase die within 10 to 14 days, the rest recover without significant organ damage.

DIAGNOSIS

Yellow fever is difficult to diagnose, especially during the early stages. It can be confused with severe malaria, dengue hemorrhagic fever, leptospirosis, viral hepatitis, other hemorrhagic fevers and poisoning. A presumptive diagnosis of yellow fever is often based on the patient's clinical features, places and dates of travel (if the patient is from a non-endemic country or area), activities, and epidemiologic history of the location where the presumed infection occurred. Blood tests can detect yellow fever antibodies produced in response to the infection. Sometimes the virus can be found in blood samples taken early in the illness.

TRANSMISSION

The mosquito is the primary vector. It carries the virus from one host to another, primarily between monkeys, from monkeys to humans, and from person to person.

TREATMENT

There is no specific treatment for yellow fever only supportive care to treat dehydration and fever. Treatment is symptomatic, aimed at reducing the symptoms for the comfort of the patient. Associated bacterial infections can be treated with antibiotics.

PREVENTION

1. VACCINATION

Vaccination is the most important preventative measure against yellow fever. It is highly recommended as an essential prevention measure for travelers to, and people living in, endemic countries. The yellow fever vaccine is safe and affordable, providing effective immunity against yellow fever within one week for 95% of those vaccinated.

a. Yellow fever vaccine recommendations

- Yellow fever vaccine is recommended to persons aged from 9 months old who are traveling to or living in areas which are at risk for yellow fever virus transmission in South America and Africa.
- The vaccine should be given 10 days before traveling to an endemic area.
- Individuals considering yellow fever vaccination should discuss their underlying health conditions with their health care provider. It is not safe to be given during pregnancy.
- People who get vaccinated should be given an International Certificate of Vaccination (yellow card) that has been validated by the vaccination center. This Certificate becomes valid 10 days after vaccination and lasts for 10 years. You will need this card as proof of vaccination to enter certain countries.

b. **Contraindications** (conditions in which vaccine should not be given)

- Allergy to vaccine component including eggs, chicken proteins, or gelatin
- Infants below 6 months
- Symptomatic HIV infection
- Thymus disorder associated with abnormal immune function
- People with primary immunodeficiency
- Malignant neoplasms
- Transplantation
- Immunosuppressive therapies

c. **Precautions** (conditions for which the risks of the vaccine and the disease should be carefully considered)

- Age 6 to 8 months
- People over 60 years of age

- Asymptomatic HIV infection
- Pregnancy
- Breastfeeding

d. Reactions to Yellow Fever Vaccine

Reactions to yellow fever vaccine are generally mild and can include headaches, body aches and low-grade fevers.

2. AVOID MOSQUITO BITES BY:

- Sleeping under a protective mosquito bed net in an air conditioned room.
- Protecting the house with mosquito netting on windows and doors to the exterior.
- Using insect repellent cream or spray on skin not covered by clothing.
- Wearing light colors and long sleeves and trousers in the evenings.

YELLOW FEVER VACCINATION REQUIREMENT FOR TRAVELERS ACROSS FRONTIERS OF GHANA

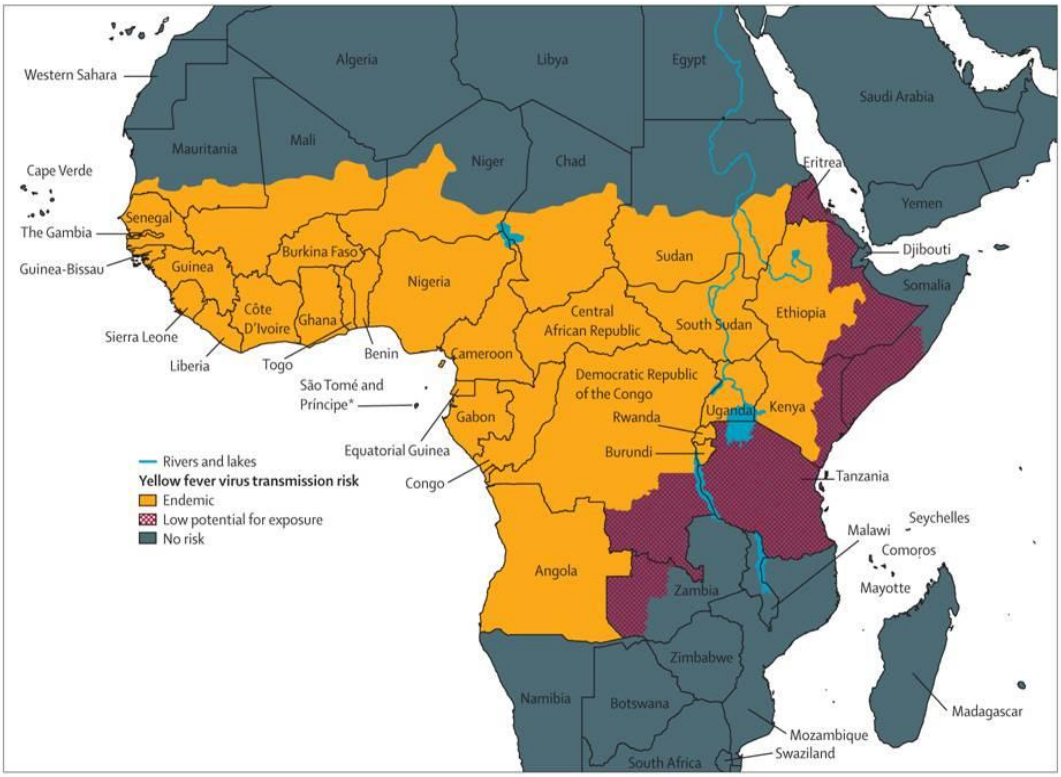
Travelers above nine (9) months old coming (into or leaving Ghana) from countries with risk of Yellow fever transmission are required to have been vaccinated against Yellow fever at least ten (10) days before and where already vaccinated the duration of vaccination status of not more than ten years before entering Ghana. This also applies to all travelers leaving Ghana.

INSPECTION OF TRAVEL CERTIFICATE

Travelers to and from Ghana will have Travel Certificate inspected with respect to Yellow Fever vaccination. Travelers from Yellow Fever risk countries must have valid Yellow Fever Vaccination Certificates.

COUNTRIES AT RISK FOR YELLOW FEVER TRANSMISION

AREAS WITH RISK OF YELLOW FEVER VIRUS TRANSMISSION IN AFRICA



Map is from the following publication: Jentes ES. Poumerol G, Gershman MD, et al. The revised global yellow fever risk map and recommendations for vaccination, 2010: consensus of the Informal WHO Working Group on Geographic Risk for Yellow Fever. Lancet Infect Dis. 2011;11:622-32.

** Since Ghana is one of the countries at risk of Yellow fever transmission, it is recommended for travelers coming from countries with no risk of Yellow Fever transmission to have valid Yellow fever Vaccination Certificate or records indicating their protection against Yellow Fever.

The World Health Organization lists the following countries as being at risk for **Yellow fever transmission in South America**: Argentina, Bolivia, Brazil, Colombia, Ecuador, French Guyana, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, and Venezuela.