FACTSHEET YELLOW FEVER

Expertenkomitee für Reisemedizin
Comité d'experts pour la médecine des voyages
Comitato di esperti per la medicina di viaggio
Expert committee for travel medicine

Key aspects briefly summarized

- Yellow fever occurs in sub-Saharan Africa and South America and is transmitted by mosquitoes.
- Disease may be severe in unvaccinated travelers and death may occur in over 50%.
- A highly effective vaccine is available.
- Due to potentially severe side effects the vaccine is used with caution in immunocompromised or elderly individuals, as well as in pregnant women.

Disease

Yellow fever is an acute viral infection transmitted through the bite of mosquitoes. The disease occurs in sub-Saharan Africa and South America. It is a potentially lethal disease. However, the vaccination offers very high protection.

Occurrence / Risk areas

Yellow fever is endemic in countries of sub-Saharan Africa and South America, and in Panama. Transmission occurs all over the year but may peak in the rainy season. Although the same species of mosquitoes are present, yellow fever has not been found in Asia.

Transmission

The yellow fever virus is transmitted to people primarily through the bite of infected daily active *Aedes* mosquitoes, or *Haemagogus* species mosquitoes, which are day and night active. Mosquitoes acquire the virus by feeding on infected primates (human or non-human) and then can transmit the virus to other primates (human or non-human). Yellow fever transmission and epidemics are facilitated by the interface of jungle, savannah and urban areas. Humans working in the jungle can acquire the virus and become ill. The virus then can be brought to urban settings by infected individuals and may be transmitted to other people.

Symptoms

Most people infected with yellow fever virus have mild or no symptoms and recover completely. Some people will develop yellow fever illness with onset of symptoms typically 3 to 6 days after infection. Symptoms are unspecific and flu-like (fever, chills, head and body pain). After a brief remission, about 10-20% will develop more severe disease. Severe disease is characterized by high fever, yellow skin and eyes, bleeding, shock and organ failure. About 30 to 60% of patients with severe disease die.

Treatment

There is no specific medication. Treatment is only supportive and consists of providing fluid and lowering fever. Aspirin and other nonsteroidal anti-inflammatory drugs, for example ibuprofen or naproxen, should be avoided due to the risk of enhanced bleeding.

Prevention

As against all mosquito-borne diseases, prevention from mosquito bites is during day and night (see "Insect and tick bite protection" factsheet). The available vaccine is highly efficacious and provides a long-term protection. It is recommended for people aged 9 months or older who are travelling to yellow fever endemic areas. In addition, providing proof of vaccination may be mandatory for entry into certain countries. The vaccine is a live-attenuated form of the virus. In immunocompetent persons, protection starts about 10 days after the first vaccination. Reactions to yellow fever vaccine are generally mild and include headache, muscle aches, and low-grade fevers. Side effects can be treated with paracetamol but aspirin and other nonsteroidal anti-inflammatory drugs, for example ibuprofen or naproxen, should be avoided. On extremely rare occasions, people may develop severe, sometimes life-threatening reactions to the yellow fever vaccine – which is why this vaccine is used with caution in immunocompromised individuals, pregnant women and the elderly for safety reasons. Talk to your travel health advisor if you belong to this group.

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Of note

In 2016, WHO changed from yellow fever booster doses every 10 years to a single dose, which is considered to confer life-long protection. However, this decision was based on limited data and mainly from endemic populations, potentially exposed to natural boosters (through contact with infected mosquitoes), which does not apply to travellers from non-endemic regions. As several experts have raised concerns about the WHO single dose strategy, the Swiss Expert Committee for Travel Medicine recommends a single booster dose ≥10 years (max. 2 doses per life-time) in immunocompetent persons after primo-vaccination before considering life-long immunity.

Further Information

Yellow Fever Map - Centers for Disease Control and Prevention: https://www.cdc.gov/yellowfever/maps/index.html

Yellow Fever Info - Centers for Disease Control and Prevention: https://www.cdc.gov/yellowfever/index.html

Yellow Fever Info - European Centre for Disease Prevention and Control:
https://www.ecdc.europa.eu/en/yellow-fever/facts