Yellow Fever—Disease and Vaccine

Yellow fever occurs only in Africa and South America. In South America sporadic infections occur almost exclusively in forestry and agricultural workers from occupational exposure in or near forests.

In Africa the virus is transmitted in three geographic regions:

- principally and foremost, in the moist savanna zones of West and Central Africa during the rainy season,
- secondly, outbreaks occur occasionally in urban locations and villages in Africa,
- and finally, to a lesser extent, in jungle regions.

Yellow fever is a viral disease transmitted between humans by a mosquito. Yellow fever is a very rare cause of illness in travelers, but most countries have regulations and requirements for yellow fever vaccination that must be met prior to entering the country. General precautions to avoid mosquito bites should be followed. These include the use of insect repellent, protective clothing, and mosquito netting. Yellow fever vaccine is a live virus vaccine which has been used for several decades. A single dose confers immunity lasting 10 years or more. If a person is at continued risk of yellow fever infection, a booster dose is needed every 10 years. Adults and children over 9 months can take this vaccine. Administration of immune globulin does not interfere with the antibody response to yellow fever vaccine.

This vaccine is only administered at designated yellow fever vaccination centers; the locations of which can usually be given by your local health department. Information regarding registered yellow fever vaccination sites can be viewed at the CDC Travelers' Health Yellow Fever website.

Note: Vaccination recommendations have recently changed (MMWR Nov. 8, 2002). In addition, there have been recent reports documenting patients between 1996 and 2001 who developed severe illness potentially related to yellow fever vaccination.

Who Should Not Receive the Yellow Fever Vaccine?

Yellow fever vaccine generally has few side effects; fewer than 5% of vaccinees develop mild headache, muscle pain, or other minor symptoms 5 to 10 days after vaccination. Under almost all circumstances, there are four groups of people who should not receive the vaccine unless the risk of yellow fever disease exceeds the small risk associated with the vaccine. These people should obtain either a waiver letter prior to travel or delay travel to an area with active yellow fever transmission:

- Yellow fever vaccine should never be given to infants under 6 months of age due to a risk of viral encephalitis developing in the child. In most cases, vaccination should be deferred
until the child is 9 to 12 months of age.

- Pregnant women should not be vaccinated because of a theoretical risk that the developing fetus may become infected from the vaccine.
- Persons hypersensitive to eggs should not receive the vaccine because it is prepared in embryonated eggs. If vaccination of a traveler with a questionable history of egg hypersensitivity is considered essential, an intradermal test dose may be administered under close medical supervision. (Notify your doctor prior to vaccination if you think that you may be allergic to the vaccine or to egg products.)
- Persons with an immunosuppressed condition associated with AIDS or HIV infection, or those whose immune system has been altered by either diseases such as leukemia and lymphoma or through drugs and radiation should not receive the vaccine. People with asymptomatic HIV infection may be vaccinated if exposure to yellow fever cannot be avoided.

If you have one of these conditions, your doctor will be able to help you decide whether you should be vaccinated, delay your travel, or obtain a waiver. In all cases, the decision to immunize an infant between 6 and 9 months of age, a pregnant woman, or an immunocompromised patient should be made on an individual basis. The physician should weigh the risks of exposure and contracting the disease against the risks of immunization, and possibly consider alternative means of protection.

**Medical Waivers**

Most countries will accept a medical waiver for persons with a medical reason for not receiving the vaccination. CDC recommends obtaining written waivers from consular or embassy officials before departure. Travelers should contact the embassy or consulate for specific advice. Typically, a physician’s letter stating the reason for withholding the vaccination and written on letterhead stationery is required by the embassy or consulate. The letter should bear the stamp used by a health department or official immunization center to validate the International Certificate of Vaccination.

Yellow fever vaccination requirements and recommendations for specific countries are available from the CDC Travelers’ Health page.