



YELLOW FEVER

Remember: A completed, signed, and validated International Certificate of Vaccination for Yellow Fever is required for entry into certain countries.

Yellow fever is a viral infection transmitted by the bite of the *Aedes aegypti* mosquito. The disease is of short duration and of varying severity. (Other *Aedes* species also carry the disease.) This disease is endemic in tropical areas of South America and Africa. Mild disease is indeterminate with fever, chills, headache, muscle pains, nausea, and vomiting and can be confused with dengue. The incubation period is 3-6 days.

The onset of illness is sudden, with a fever of 102-104⁰F. As the disease progresses, the pulse slows, even though one's temperature is elevated. Remission can occur, lasting hours to several days, then fever returns ("saddle-back" fever curve). Yellowing of the skin can occur, along with nosebleeds, bleeding gums, "coffee-ground" appearing vomitus, or black, tarry stools. Confusion or mental dullness may be observed. The case-fatality rate among indigenous populations in endemic areas is 5%. This rate can climb to > 50% for non-indigenous groups or in epidemics. This latter information should serve as a reminder of the imperative to receive yellow fever vaccine.

Yellow fever vaccine is a live virus vaccine, which has been used for decades. A single dose confers immunity lasting 10 years or more. If a person is at continued risk of yellow fever, a booster dose should be sought every 10 years. Adults and children over 9 months can receive this vaccine.

This vaccine is only administered at designated yellow fever vaccination centers. Center locations can usually be provided by your local health department. Information regarding registered yellow fever vaccination sites can also be found at the Centers for Disease Control and Prevention website. <http://www.cdc.gov/ncidod/dvbid/YellowFever/vaccine/>

Who Should Receive Yellow Fever Vaccine? Persons aged ≥ 9 months, who are traveling to or living in areas of South America and Africa where yellow fever infection is officially reported, should be vaccinated. While yellow fever is a rare cause of illness in travelers, many countries have regulations and requirements for yellow fever vaccination that must be met prior to entering the country. Yellow fever vaccination requirements and recommendations for specific countries are listed below.

Note: Serious adverse events can occur following vaccine administration. Therefore, vaccine should only be offered to persons at risk for exposure to Yellow Fever or who require proof of vaccination for country entry (MMWR Vol. 59, No. RR-7; 2010).

Active immunization against Yellow Fever consists of a single injection, which produces excellent immunity. A vaccination certificate, issued when the vaccine is administered, becomes valid in ten (10) days. Revaccination every 10 years is required for The International Certificate of Vaccination to remain valid.

Yellow fever vaccine should never be given to infants under age 6 months. It is contraindicated for infants in their first three months of life. Children four to nine months of age should be evaluated by a health care provider to determine the extent of risk versus benefit.

The vaccine is not recommended in the first trimester of pregnancy, unless the risk of disease is believed to be greater than the theoretical risk to the pregnancy. If you are pregnant, travel to yellow fever endemic areas is discouraged.

The vaccine is not recommended in circumstances where live vaccines are contraindicated, including individuals with decreased immunity (being treated with steroids, chemotherapy, or radiation) and those with lymphoma, cancer, or HIV/AIDS.

The YF vaccine can cause mild side effects. These include headache, muscle aches, and slight fever. Local soreness at the injection site may occur five to ten days after vaccination.

Medical Waivers. Most countries will accept a medical waiver for persons with a medical reason for not receiving the vaccination. It may be useful to obtain a written waiver from a foreign country consular or embassy official before departure. Travelers should contact the appropriate embassy or consulate for specific advice. Typically, a physician's letter stating the reason for withholding the vaccination, written on letterhead stationery, is required by an embassy or consulate to issue a waiver. The letter should bear a health department or official immunization center stamp to validate the International Certificate of Vaccination

Avoid Mosquito Bites

Insect Repellent: On exposed skin when you go outdoors, use an EPA-registered insect repellent, such as those containing DEET (15%) - cautioned use with small children; picaridin, or oil of lemon eucalyptus. Even a short time outdoors can be long enough to get a mosquito bite. For details on when and how to apply repellent, see the EPA website: http://www.epa.gov/pesticides/health/mosquitoes/ai_insectrp.htm.

Wear Proper Clothing to Reduce Mosquito Bites: When weather permits, wear long-sleeves, long pants, and socks when outdoors. Mosquitoes may bite through thin clothing, so spraying clothes with repellent containing permethrin or another EPA-registered repellent offers additional protection. Don't apply repellents containing permethrin directly to skin.

Be Aware of Peak Mosquito Hours: Peak biting times for many mosquito species is dusk to dawn, however *Aedes aegypti*, the main vector of the Yellow Fever virus, feeds during the daytime. It is advisable to use repellent and protective clothing during daytime hours, as well as evening and early morning, or consider avoiding outdoor activities in areas where yellow fever is a risk.

CDC Fact Sheet

http://www.cdc.gov/ncidod/dvbid/yellowfever/YF_FactSheet.html

Countries within the Yellow Fever-Endemic Zone†

AFRICA			CENTRAL AND SOUTH AMERICA
Angola	Equatorial Guinea	Nigeria	Argentina ¹
Benin	Guinea	Rwanda	Bolivia ¹
Burkina Faso	Ethiopia	Sierra Leone	Brazil ¹
Burundi	Gabon	São Tomé and Príncipe	Colombia
Cameroon	The Gambia	Senegal	Ecuador ¹
Central African Republic	Ghana	Somalia	French Guiana
Chad	Guinea	Sudan	Guyana
Congo	Guinea-Bissau	Tanzania	Panama ¹
Côte d'Ivoire	Kenya	Togo	Paraguay ¹
Democratic Republic of Congo	Liberia	Uganda	Peru ¹
	Mali		Suriname
	Mauritania		Trinidad and Tobago
	Niger		Venezuela ¹

†As of November 2006. For current information travelers should consult official resources, such as www.cdc.gov/travel or the WHO web site prior to travel.

¹These countries are not holo-endemic. See Map 4-16 and yellow fever vaccine recommendations for details. (Updated July 9, 2007)

MAP 4-15. Yellow fever-endemic zones in Africa, 2007.



(Updated July 18, 2007)

MAP 4-16 Yellow fever-endemic zones in the Americas, 2007.

Note: For the most current country-specific yellow fever risk areas for Argentina, Brazil and Ecuador, see [Updated CDC Yellow Fever Risk Map for Argentina](#); [Updated CDC Yellow Fever Risk Map for Brazil](#) (*Updated April 17, 2009*); and [Updated CDC Yellow Fever Risk Map for Ecuador](#) (*Updated May 5, 2008*).



Countries that require proof of vaccination against yellow fever for all arriving travelers

Angola Benin Bolivia (or signed affidavit at point of entry) Burkina Faso Burundi Cameroon Central African Republic Chad Congo Côte d'Ivoire Democratic Republic of the Congo	French Guiana Gabon Ghana Liberia Mali Mauritania (for a stay >2 weeks) Niger Rwanda São Tomé and Príncipe Sierra Leone Togo
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No vaccinations are currently required for return to the United States. (*Updated July 29, 2008*)