

QUICK LINKS**Plague—TRAVELER INFORMATION**

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Traveler Information

PLAGUE**GENERAL INFORMATION****Introduction**

Plague is an infectious disease of animals and humans caused by a bacterium (*Yersinia pestis*). Plague can take any of several forms: pneumonic, bubonic, or septicemic.

Mode of Transmission

Flea bites: Plague bacteria are most often transmitted by the bite of an infected rodent flea. Flea bite exposure results in bubonic plague or septicemic plague.

Contact with contaminated fluid or tissue: Humans can become infected when handling tissue or body fluids of a plague-infected animal. This form of exposure most commonly results in bubonic or septicemic plague.

Infectious droplets: Pneumonic plague is transmitted when a person breathes in *Y. pestis* particles in the air. Typically this requires direct and close contact with the infected person. Transmission via droplets is the only way that plague can be transmitted from person to person.

Risk Areas

Each year about 1,000 to 3,000 cases occur globally.

More than 95% of cases originate in Africa, most of those from the Democratic Republic of Congo and Madagascar. Zambia, Uganda, Mozambique, Tanzania, China, Peru, Malawi, Indonesia, and Vietnam account for most of the remaining cases. Approximately 1-17 cases are acquired naturally in the U.S. each year.

Risk

The risk of plague to travelers is extremely small (especially if travel is limited to urban areas with modern hotel accommodations) and is restricted to rat-infested rural endemic areas. Reservoirs include rats, field mice, gerbils, birds, and marmots. All ages are at risk for infection.

Travelers potentially at risk include:

- Persons exposed to the bites of wild rodent fleas during an outbreak or to the tissues or fluids of a plague-infected animal
- Persons closely exposed (i.e., face-to-face contact or being within the same closed space, such as a room or vehicle) to a person or animal with suspected plague pneumonia
- Persons traveling to a highly epidemic area for a short duration

Symptoms

- Bubonic plague (most frequent): sudden onset of fever, headache, chills, weakness, and one or more painful, swollen, tender

lymph nodes (called buboes)

- Pneumonic plague: fever, headache, weakness, and a rapidly developing pneumonia with shortness of breath, chest pain, cough, and sometimes bloody or watery mucous. The pneumonia can cause respiratory failure or shock
- Septicemic plague: fever, chills, extreme weakness, abdominal pain, shock and possibly bleeding into the skin and other organs. Skin and other tissues can turn black and necrotic. Septicemic plague can occur as the first symptom of plague, or may develop from untreated bubonic plague.

Need for Medical Assistance

Persons with symptoms suggestive of plague who live in or have recently traveled to any plague-endemic area should seek medical care immediately.

PREVENTION

Non-Vaccine: Preventive measures are aimed at reducing contact with fleas, rodents, and other wildlife that might be infected.

- Avoid areas of recent plague epidemics or epizootics, especially places where large numbers of rats have died of plague.
- Avoid contact with rodents, fleas, and sick or dead animals (including cats) in plague areas.
- Use insect repellents containing DEET or picaridin, consider using aerosol room insecticides to kill indoor insects, apply permethrin to clothing, outer bedding, and bed netting, and stay in the cleanest places possible (see *Insect Precautions*).
- Persons working in health care settings should follow droplet precautions while working with suspected plague patients, especially if the patient is coughing.

Antibiotic Postexposure Prophylaxis is indicated for persons with known exposure to plague, such as close contact with a pneumonic plague patient or direct contact with infected body fluids or tissues. (See below.)

Vaccine: Currently there are no effective plague vaccines available or in advanced clinical development.

POSTEXPOSURE PROPHYLAXIS

The drugs of choice for postexposure prophylaxis are doxycycline or ciprofloxacin taken for 7 days.

TREATMENT

Treatment should begin within 24 hours of first symptoms. The drug of choice when given by injection is gentamicin. (Available oral medications include doxycycline, ciprofloxacin, and moxifloxacin.) Duration of treatment is 10 days, or 2 days after fever subsides.

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