



PLAGUE

Agent information:

Plague is caused by the gram-negative bacteria *Yersinia pestis*. There are three types of infection: pneumonic, bubonic, or septicemic. The bacterium occurs naturally in many areas of the world, including the U.S. Pneumonic plague is the most likely form that would result from a bioterrorist attack.

Transmission:

Plague bacteria may be transmitted to humans through the following:

- Bite of an infected flea. Fleas may first become infected by feeding on plague-infected animals (rodents, dogs, or cats). This type of transmission would most likely result in bubonic or septicemic plague.
- Contact with contaminated fluid or tissue when handling a plague-infected animal. This type of transmission would most likely result in bubonic or septicemic plague.
- Infectious droplets produced when a person with pneumonic plague coughs. Another person may become infected by breathing in these droplets. Pneumonic plague is the only form of plague that is spread from person to person.

Septicemic plague may develop as a complication from untreated bubonic plague. Pneumonic plague may develop from untreated bubonic or septicemic plague.

Signs and symptoms:

Incubation period generally is one to six days. General symptoms for all types of plague include fever, chills, weakness, and headache. Specific symptoms for each type:

Pneumonic: Rapidly developing pneumonia (24 to 36 hours from onset of illness) with shortness of breath, chest pain, cough, and hemoptysis. The combination of a rapidly progressive influenza-like-illness (ILI) with bloody sputum is highly suspicious of pneumonic plague.

Bubonic: One or more swollen lymph nodes or buboes.

Septicemic: Abdominal pain, shock, and bleeding into the skin and organs, causing skin and other tissues to turn black and die – specifically on fingers, toes, and nose.

Decontamination: Yes, if exposure is from aerosolization and presentation is immediate.

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Contact Number: 302-223-2999



Isolation:	Negative pressure for pneumonic plague.
Protective measures:	Pneumonic: Contact and droplet precautions with use of an N-95 mask as a minimum. Maintain patients in negative pressure isolation rooms for at least 48 hours after beginning antibiotic therapy.
Evaluation:	Clinical specimens for PCR: sputum, bronchial washes, transtracheal aspirates, NP swabs (NO transport medium can be used for PCR testing). Clinical specimens for culture: include the above, plus: blood; bubo aspirate; biopsied specimen of liver, spleen, bone marrow; or lung tissue.
Prophylaxis:	<ul style="list-style-type: none">• No vaccine of proven efficacy against primary pneumonic plague exists.• Antibiotic treatment for seven days protects people who had direct, close contact with infected persons.• In a contained casualty setting, parenteral streptomycin or gentamycin are recommended.• In a mass casualty setting when IV or IM therapy may not be possible, oral doxycycline (or tetracycline), ciprofloxacin, or chloramphenicol are recommended.• Doxycycline is the first choice for post-exposure oral prophylaxis.
Treatment:	Immediate: Antibiotics must be given within 24 hours of first symptoms to reduce mortality. Streptomycin, gentamycin, tetracyclines, and chloramphenicol are expected to be effective. First 24 to 48 hours: Advanced medical supportive cares required. Complications of gram-negative sepsis would be expected, including ARDS, DIC, shock and multi-system organ failure.
Reporting:	Immediately report suspect cases to the Division of Public Health, Office of Infectious Disease Epidemiology: 1-888-295-5156 (24/7 coverage).
Additional information:	Visit the Centers for Disease Control and Prevention website: http://www.cdc.gov/plague/healthcare .

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