Pneumonic Plague Fact Sheet

**Pneumonic plague** [new-mon-ick play-ge] is a contagious, potentially deadly disease. There is medicine available to prevent infection and treat illness, but it must be taken right away to increase the chance of living.

**GENERAL INFORMATION**

**What is plague?**

Plague is a disease caused by the bacteria (germ) called *Yersinia pestis* [yer-sin-ea pest-iss]. It can affect humans and animals. Plague is considered one of the diseases that might result from a bioterrorism attack. Although deadly, people may live if they are treated quickly.

**Are there different types of plague?**

There are three types of plague disease caused by the *Yersinia pestis* bacteria (germ). The type of disease a person develops depends on how the bacteria enter the body.

1. **Pneumonic plague**
   Pneumonic plague is an infection in the lungs. In a bioterrorism attack the *Yersinia pestis* bacteria may be released in the air. People would breathe in the *Yersinia pestis* bacteria, infecting their lungs. It could then spread from person to person. Symptoms may appear within 1-4 days of exposure. It is the type of plague that is most likely to occur as a result of a terrorist attack.

2. **Bubonic plague**
   Bubonic plague [boo-bon-ick play-ge] is an infection of a lymph gland. Bubonic plague could result from a bioterrorism attack using the release of fleas carrying the *Yersinia pestis* bacteria, or infected animals. Bubonic plague usually happens when a flea carrying the bacteria bites a person. Symptoms may appear within 2-8 days of exposure.

3. **Septicemic plague**
   Septicemic plague [sep-ti-see-mick play-ge] is an infection of the bloodstream. It occurs when the *Yersinia pestis* bacteria enter the bloodstream, such as through a break in the skin, and multiply. It can also occur as a result of pneumonic or bubonic plague. Septicemic plague does not spread from person to person. It is the least common type of plague.
How can the Yersinia pestis bacteria be released by terrorists?

- The Yersinia pestis bacteria (germ) that causes plague may be released into the air, either outdoors or indoors. This might cause people to develop pneumonic plague.
- The Yersinia pestis bacteria may be released using infected animals or fleas carrying the bacteria. This might cause people to develop bubonic plague.

How can I be exposed to the Yersinia pestis bacteria?

You might be exposed to the bacteria (germ) that causes plague by:
1. Inhaling Yersinia pestis bacteria that was released into the air.
2. Sharing a home or having close contact (within 6 feet) with a person infected with pneumonic plague.
3. Handling animals that are possibly sick or dead from plague, or exposure to their fleas.
4. Being bitten by an animal that is possibly sick from plague.

How long will the threat of plague exposure last?

The continuing threat depends on how the Yersinia pestis bacteria (germ) is released by terrorists:
- If plague is released into the air it can only live for about 1 hour. After 1 hour, it is likely that the air and ground at the location of the release will no longer be a threat. Local authorities will provide information about safety in the affected area when it is available. The continuing threat will be the persons or animals infected with the plague who may infect others. The bacteria released into the air will continue to exist in people or animals that inhaled them, until treated.
- If plague is released using infected animals or fleas carrying the bacteria, they may continue to be a threat until they are treated or destroyed.
What are the symptoms of pneumonic plague?

Symptoms of pneumonic plague include:
- Flu-like symptoms such as fever, headache, weakness, chills and muscle aches
- Symptoms of pneumonia which develop quickly, such as shortness of breath, chest pain, and cough
- Coughing up blood
- Feeling sick to the stomach, throwing up, or having stomach pains

Most people develop these symptoms in 1-4 days, but they may occur up to 6 days after the attack or after exposure to a person with pneumonic plague.

What should I do if I have symptoms of pneumonic plague?

Anyone with symptoms of the flu or pneumonic plague should seek medical care right away. Treatment with the right antibiotics (medicine) within 24 hours of developing symptoms greatly increases the chance of living. If treatment is not received within 24 hours of developing symptoms, pneumonic plague usually leads to death.

Local health officials will tell you where to go for medical care. If this information is not available, anyone with symptoms of the flu or pneumonic plague should go to their family doctor or local hospital.

How is pneumonic plague spread?

Pneumonic plague is contagious and can spread from person to person, through respiratory droplets. Respiratory droplets are moist, tiny particles containing bacteria. They are exhaled when a person talks, sneezes, or coughs. Respiratory droplets are then inhaled by people nearby (up to 6 feet away).

Pneumonic plague may also develop if a person with bubonic or septicemic plague doesn’t get treated and the bacteria spread to the lungs.
How is pneumonic plague treated?

- People with symptoms of pneumonic plague may be hospitalized and receive antibiotics (medicine) through an IV. An IV is a small tube that’s put into a vein. Medicine then flows through the tube and into the body. People with symptoms of plague may also receive oral antibiotics.
- People who are exposed to pneumonic plague, but who do not show symptoms, may be given oral antibiotics for 7 days to prevent illness.

How quickly do I need to seek treatment?

It is very important for those exposed to seek immediate medical care, even if symptoms are not present. To prevent illness, treatment must be received quickly. Antibiotics (medicine) must be given within 24 hours of the first symptoms to increase the chance of living.

Are there enough antibiotics available to treat everyone?

Most antibiotics (medicines) used to treat pneumonic plague are readily available. If greater supplies are needed, such as after a large bioterrorism attack, emergency drugs and equipment from the Strategic National Stockpile can be delivered anywhere in the country within 12 hours.

Is there a cure for pneumonic plague?

People may be able to prevent pneumonic plague from developing at all by seeking treatment as soon as possible after exposure. After people develop symptoms, they must receive antibiotics (medicine) within 24 hours of having their first symptoms in order to increase their chance of living. Without treatment, pneumonic plague is almost always fatal.

What are the long-term effects of pneumonic plague?

People who receive treatment for pneumonic plague and get better will have no more symptoms of plague. Without immediate treatment, death is likely to occur within 2 to 3 days after symptoms begin.
How do I safely get rid of items with Yersinia pestis bacteria on them?

Pneumonic plague is normally not spread from clothing, furniture, utensils, or bed linens. It is spread from respiratory droplets from an infected person or animal. You do not need to throw away contaminated items. Clothes and sheets may be washed as usual. Household items can be cleaned with antibacterial soap and water or standard household cleaners that have “disinfectant” on the label, like ammonia or bleach. Homes of persons infected with plague can also be cleaned with standard household cleaners that have “disinfectant” on the label.

How can I lower my chance of getting sick if I have to be around someone who has pneumonic plague?

If you have been exposed to someone with pneumonic plague, illness may be prevented by seeking treatment immediately. If you become ill, antibiotics (medicine) must be taken within 24 hours after symptoms develop to increase the chance of living. If exposure to people with pneumonic plague cannot be avoided, wear a surgical mask that covers your nose and mouth to reduce exposure to the Yersinia pestis bacteria (germ).

Where can I go to get more information?

Local officials will get information to people through TV and radio and often through other local agencies. Your local and state health department are good sources of information following a bioterrorism attack. The Centers for Disease Control and Prevention (CDC) are also good sources of information. Their web site, www.cdc.gov contains accurate information and links to other resources.