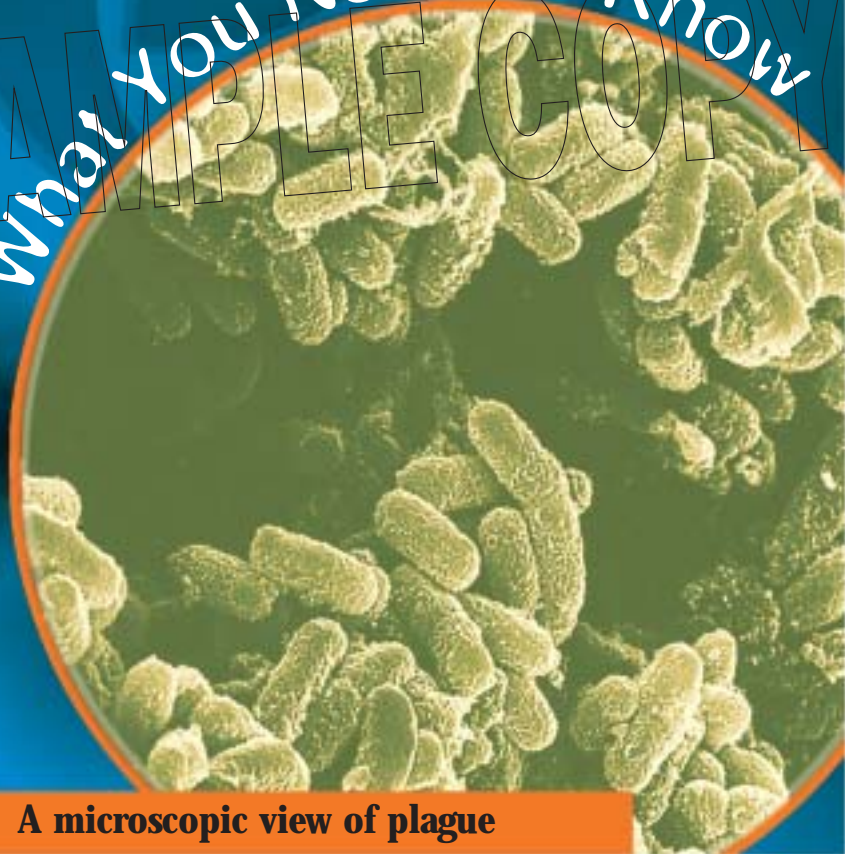


Biothreat: Plague

What You Need to Know



A microscopic view of plague

Diseases as Weapons

Many diseases could be used as weapons, but most are hard to obtain, preserve, and spread. Terrorists first have to buy or steal a sample of the disease. This alone can be difficult and very expensive.

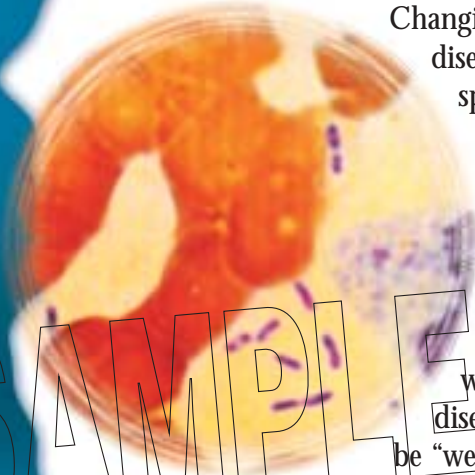
Terrorists must protect themselves from the disease, which can require complex, expensive equipment.

Changing a test tube sample of a disease into a form that can be spread easily is hard to do.

Terrorists need large amounts of the disease to hurt many people.

A laboratory version of a disease is usually fragile.

Outside of a test tube, it would die quickly. For a disease to be spread, it has to be “weaponized,” which is a complicated scientific task.



Is Plague a Serious Threat?

Plague is easier to obtain than other diseases. It can be found in nature, usually in fleas on rodents such as rats. Samples of plague exist in laboratories around the world. Terrorists may be able to buy weaponized plague more easily than other diseases.



Plague is a disease that can be spread among large numbers of people. Pneumonic plague, the most serious type of plague, could be easily spread as an aerosol bioweapon. Victims would breathe the plague particles in the air.

The size of an epidemic caused by an attack would depend on the amount of bacteria, the weather conditions, and methods of spreading the disease. Infected persons can pass it on to others.

Symptoms (signs) of plague would show 1-2 days after a plague bioattack, and many people would die quickly after showing symptoms.

Mentioning the word “plague” tends to cause panic. In 1994, a small number of cases were reported in Surat, India and some 500,000 people fled the city.

Today, no environmental or quick diagnostic tests exist to detect plague. However, plague can be treated with antibiotics.

Types of Plague

Plague is caused by the bacteria *Yersinia pestis*. There are three types of plague. The first two types (bubonic and septicemic plague) are more common and occur in nature. The third type (pneumonic plague) is very rare and is the type that would be used as a bioweapon. The characteristics associated with each type of plague are:

Bubonic Plague



Often caused by the bites of fleas that live on infected rodents.

- Very large, tender, and painful lymph nodes (glands)
- Fever
- Chills
- Extreme tiredness

Septicemic Plague



Septicemic plague causes infection throughout the blood.

- Fever
- Chills
- Extreme tiredness
- Stomach pain
- Shock
- Bleeding under skin and other parts of body

Pneumonic Plague



Pneumonic plague is very dangerous, causing pneumonia or lung infection. It can be passed from person to person by coughing. Symptoms include:

- Fever
- Chills
- Cough
- Trouble breathing (severe pneumonia)
- Shock (happens quickly)
- Death (if untreated)

Plague in History

541 AD: The first plague epidemic (large outbreak) began in Egypt and in four years spread around the world. Between 50 and 60 percent of the world population died.

1346: Second plague epidemic, called the Black Death or Great Pestilence, killed about 43 million people around the world. It lasted 130 years.

1855: A third epidemic killed more than 12 million people in India and China alone. It also spread throughout the world.

1950s-1960s: The U.S. and Soviet Union developed plague as a bioweapon.

Avoiding Plague Exposure


A vaccine to prevent bubonic plague is known, but it is no longer available. No vaccine exists for pneumonic plague, although research is being done to find one.

Bubonic and septicemic plague do not spread from person to person. If someone knows that they have been exposed to pneumonic plague, they should go to a health care facility immediately.

If you know of someone who has been exposed to or has developed plague, call your local health authorities. People who might come into contact with infected persons should wear simple surgical masks. An infected person should also wear a mask to avoid infecting others.

There is no quick test available to diagnose plague in the case of an attack. Be alert of any suspicious behavior in public places and report it to the police.





The World Health Organization estimated that if a plague aerosol cloud were spread over a city of 5 million people, 36,000 people would die.

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Treatment

When the bacteria that causes plague enters the body, it spreads quickly by entering the bloodstream. In the bloodstream, the bacteria multiply even faster.

An infected person should be immediately hospitalized and kept apart from others.

Exposed persons should receive antibiotic treatment right after laboratory samples are taken. Modern antibiotics can be effective in treating the plague. If untreated, a person will die of pneumonic plague.

Keep in Mind

Although possible, a mass exposure to plague would be hard to make happen. If found early, plague can be treated with antibiotics. If a threat of bioattack is high, a plague vaccine may become available. If you have any symptoms of plague see a doctor immediately.

For More Information:

Online Terrorism Resource Site

www.syndistar.com/terrorism

Centers for Disease Control and Prevention (CDC)

1-800-311-3435 www.cdc.gov

U.S. Department of Health and Human Services (DHHS)

1-877-696-6775 www.os.dhhs.gov

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